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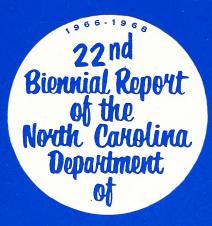
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# ONSERVATION & DEVELOPMENT





Forest Fire Control with aerial delivery of fire retardant chemicals from a converted World War II B-17 Bomber.

N872 1966/68

To His Excellency
The Honorable Robert W. Scott
Governor of North Carolina

In compliance with the Statutes of North Carolina, I am transmitting herewith the report of the Department of Conservation and Development for the biennium ending June 30, 1968.

Respectfully

Dan E. Stewart

Director

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Dan E. Stewart, Director

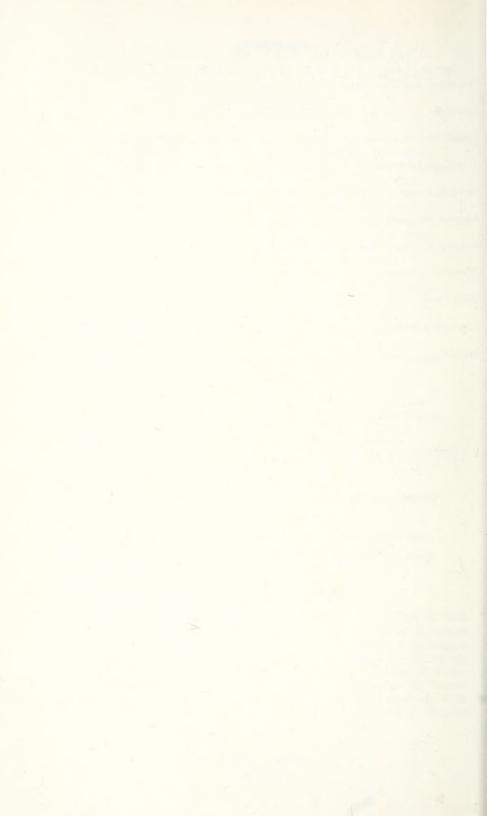
Victor W. Barfield, Assistant to the Director (Administration) Paul F. Judson, Assistant to the Director (Public Information)

#### DIVISIONS AND DIVISION HEADS

Commerce and Industry	Robert E. Leak
Commercial Fisheries Dr. Dr.	avid A. Adams
Community Planning Georg	e J. Monoghan
Forestry Ralph	C. Winkworth
Geodetic Survey W	ilbur E. Fuller
Mineral Resources Step	hen G. Conrad
Parks T	homas C. Ellis
Travel Information	Bill F. Hensley

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# **FOREWORD**

The mission of the Department of Conservation and Development is to conserve and develop and to promote the wise use of the natural resources of North Carolina for the common good of all her people.

This report is an account of the department's stewardship for biennium ending June 30, 1968.

In the interest of readability, much detail has been omitted. Those persons wishing more information about specific phases of the department's programs need only to contact the Department or the Division directly concerned.



# DIVISION OF COMMERCE AND INDUSTRY

Capital investment is new and expanded industrial plants, during 1966-68 biennium, was greater than had been reported in any previous biennial period. For the first time, these investments exceeded the \$1 billion mark and reached a total of \$1,281,986,000.

During the biennium, new industrial employment was provided for 55,116 North Carolinians. It is significant to note that the average starting salary for new employees during the biennium was \$4,260. This compares to a starting salary of \$3,650 for the 1964-66 biennium, or an average starting salary gain in all industrial classifications of almost 17%.

Following is a summary of gains for the last two bienniums and gains in major industrial classifications.

# **BIENNIAL SUMMARIES**

	New	Investments	Added Payrolls	Added Employees
1966-68 1964-66	$\begin{array}{c} 297 \\ 361 \end{array}$	\$725,801,000 391,470,000	\$130,047,000 158,137,000	29,987 43,216
1966-68 1964-66	Expansions 689 759	\$556,185,000 581,412,000	\$104,228,000 115,493,000	25,129 31,386
1966-68 1964-66	New and Expansions 986 1,120	\$1,281,986,000 972,882,000	\$234,275,030 273,630,000	55,116 74,602

# GAINS BY MAJOR CLASSIFICATIONS BIENNIUM 1966-68

	. of jects	Investment Totals	Payroll Totals	Added	Employees Totals
Textiles	236	\$402,155,000	\$55,680,000	(2) 1	4,039 (2)
Metalworking	222	271,224,000	73,145,000	(1) 1	5,077(1)
Chemicals & Allied		, ,	, ,	` ,	, , ,
Products	<b>4</b> 8	196,171,000	10,202,000	(5)	1,831 (7)
Paper & Allied					
Products	33	141,255,000	9,901,000	(6)	1,887 (6)
Food & Kindred					
Products	65	98,834,000	9,248,000		2,162 (5)
Tobacco Manufacturers	17	50,188,000	4,913,000	(8)	1,016 (8)
Furniture & Fixtures	91	34,326,000	13,598,000	(4)	3,525 (4)
Apparel & other Finished	-		. ,	, ,	, , ,
Products	106	24,157,000	39,720,000	(3) 1	1,635 (3)

Whereas the above summary shows that Textiles ranked first in investment totals, it is significant to note that Metalworking ranked first in added payrolls and added employees. Rank is denoted by number in parentheses for payrolls and employees.

The continuing trend in industrial diversification is attributed to several factors. Among these are capable industrial training, the development of quality industrial sites by more communities, and a striving toward diversity by the Commerce and Industry Division.

Some of the firms announcing new plants in North Carolina during the biennium include: Hercules, Inc., Wilmington; Black and Decker Manufacturing Co., Fayetteville; The Lufkin Rule Company, Apex; Ingersoll-Rand Company, Mocksville; Sola Basic Industries (Div. of Hevi-Duty Electric), Goldsboro; Sylvania Electric Products, Inc., Reidsville; Carter's Ink Company, Edenton; Colonial Stores, Inc., Lexington; Illinois Tool Works, Inc. (Hi-Cone Div.), Zebulon; Jefferson Mills, Williamston; Studebaker-Worthington Corp. (Gravely Tractor Div.), Clemmons; Joseph Schlitz Brewing Co., Winston-Salem; Weyerhaeuser Co., New Bern; Gaylord Container (Div. of Crown Zellerbach Corp.), Raleigh; Abbott Laboratories, Rocky Mount; General Electric Company, Wilmington; Mitchell Engineering (Div. of Ceco Corp.), Rocky Mount; Westinghouse Electric Corp., Charlotte; Cutler-Hammer, Inc., Arden; and Acme Electric Co., Lumberton.

# COMMUNITY & INDUSTRIAL SERVICES

The purposes of this Section are two-fold. Direct aid is given to communities in building effective development programs and assistance is given to existing industry in a variety of ways. The bulk of this work is done through a system of five regional offices.

During the biennium, several new responsibilities have been given to the Section. Two of these are of particular importance. The Section now handles, through its Regional Representatives, all of the work of inventorying and maintaining information on available industrial sites and buildings. In addition, through an Expansion Coordinator on the staff, the Section handles the bulk of the work in helping existing firms with their expansion plans, particularly when the location of new sites is involved. This latter activity is giving the same plant location

services to existing industry that have been given to industry outside of the State.

Because of the operation of regional offices, the Section has been better prepared to actively engage in a variety of special events and projects. During the biennium, the Section sponsored Buyer-Supplier events that attracted over 800 firms interested in new sales and sources of supply within the State. A series of meetings were held across the State designed to stimulate towns and counties to acquire or upgrade water and sewer systems capable of serving industry. These were attended by approximately 1,800 people, many of whom are connected with either local or county government. Other events and projects related to industrial development have also been sponsored during the biennium.

Whereas the Section experienced increased activity, acceptance of its role by communities and industry points to its continued growth as an important part of the Division's program.

# RESEARCH & STATISTICS SECTION

This Section collects, collates, and files for ready reference much of the data required to support the industrial development program in the State. These data include not only those of State-wide nature but also statistics and general information on the various counties and municipalities. Its basic service is in furnishing facts for the Division's industrial prospects. Considerable information is also furnished to all allied development agencies, business editors throughout the Nation, and to banks, insurance companies and others concerned with economic growth.

In addition, the Section is responsible for gathering and tabulating a continuing record of the industrial growth of the State by assembling figures on new industries and the expansion of existing manufacturing plants. This record includes the location of new plants, their products, proposed employment and investment in each enterprise. Similar data is assembled on expansion of existing industries. Records of this nature make it possible to measure the rate of the State's industrial growth, the trends in diversification, geographical location, and give a basis on which future programs can be planned.

The community data forms that were introduced during the last biennium have proved to be a most useful and synchronized

pattern for information on the various communities in the State. The Section currently has this pertinent information on file for 275 communities. The second and "capsule" community data form, which is compiled in the Section, covers some 240 communities throughout North Carolina.

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The updating and addition of promotional literature used to show North Carolina in a favorable position is another important activity in the Section. Among the most effective of these publications has been Legal Aspects of Doing Business in North Carolina, North Carolina Factors Favorable to Industry, Annual Industrial Development Summary, North Carolina—a State on the Move, North Carolina Industrial Contact List, and monthly and annual lists of new industries announced in North Carolina.

Screening of quarterly and annual reports received from 500 leading manufacturing firms throughout the Nation is a continuous project in the Section. Pertinent information relative to expansion plans and new product development furnishes leads for acquiring additional industrial prospects.

Some 12,000 general inquiries have been handled by the Section this biennium. Manufacturers throughout the Nation, school children, graduate students, and individuals seeking certain goods and services make up the bulk of the general inquiries mail. Many of these inquiries request the names of North Carolina manufacturers producing specific products. New business created for manufacturers by supplying this information is a gratifying part of this endeavor.

# TECHNICAL SERVICES SECTION

The purposes of the Technical Services Section are to lend support to the general development staff and others within the Division by handling requests for information which are normally related to markets, materials, transportation, and other technically oriented components of industrial plant location. Quite often, such requests result in conducting special studies in order to obtain factual data. For this purpose, the staff includes specialists in marketing and other pertinent fields.

In addition to its normal activities, the Section has carried out several important supplemental assignments during the biennium. Two specialized missions were conducted, one to the sporting goods industry and the other to the machine tool industry. All of the research and background work for these was done by the Section.

With the rise of the metalworking industry in the State, a great many requests are received on various phases of that industry. A special study was made as a complete analysis of that business in the State.

One of the most important projects is that of creating an industrial data system. Real progress is being made on bringing into operation a system, employing electronic data processing, for quick retrieval of a wealth of information on existing industry in the State. The system will provide data for analyzing the manufacturing sector, for development planning, supplying buyer lists and seller lists for a large number of products and services, and other extremely useful information on industry in North Carolina.

A great deal of the work that was done in the preparation of the Division's newest promotional brochure material, "North Carolina Information", was done within the Section. The Division's newsletter, "North Carolina Report" and all other published materials, including the graphics employed, emanate from the Technical Services Section.

# AVIATION

The 1967 General Assembly passed legislation creating the Governor's Aviation Committee and appropriated \$250,000 to enable the Committee to assist in the construction and improvement of airports in North Carolina. The Aviation Specialist of the Division works directly with the Committee and handles the bulk of the work involved in bringing requests for assistance to the Committee for consideration.

Grants from the State Aid to Airport Program have been approved to the following and in the amounts specified.

\$30,000
\$40,000
\$ 3,500
\$ 3,500
\$20,000
\$ 7,500
\$13,500
\$ 6,000

The Governor's Aviation Committee will meet next in July,

1968, to consider requests from nine additional airport projects for supplemental funds.

In addition to activities involving the Governor's Aviation Committee, the Aviation Specialist carries out the responsibility of promoting the development of general aviation facilities and relating to communities the importance of such facilities to industry seeking plant location sites.

Close contact is maintained with several agencies that assist, financially and otherwise, in airport development and improvements. Among these are the Federal Aviation Administration, Appalachia Regional Commission, and the Economic Development Administration.

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# **EXPORT**

Including among the outstanding activities of the biennium were a three pronged program in 1966 composed of the North Carolina Apparel and Household Textile Show in Stockholm, the North Carolina Trade Mission to Europe and an Industrial Development Mission to Europe. Other special activities included the North Carolina Trade Mission to South America and the Pan American Multi-Trade Mission to Australia. The latter Mission allowed visits to Hong Kong, Thailand and Japan and the opportunity to evaluate potential for the sale of North Carolina products in the Far East.

Although activities such as these constitute an important part of the program of export development, continual work is done to individually assist North Carolina manufacturers to enter the world trade market. In addition to personal contact, trade leads are constantly sent to manufacturers, referring to products needed by overseas buyers. The Export Coordinator cooperates with the North Carolina World Trade Association, Regional Export Development Council and others in planning and conducting export conferences and workshops and participates in the programs of these events.

The latest North Carolina World Trade Directory was published during the biennium and copies have been distributed world-wide. Requests continue to be received for this publication.

# FINANCING

The availability on the Division's staff of a Financial Consultant becomes more and more important as industrial financing itself becomes more complex and, in many cases, more difficult.

It is the responsibility of the Financial Consultant to assist prospective and expanding industry, community industrial development organizations and others in putting together feasible financing plans for industrial buildings, land, and equipment.

This has been an extremely active biennium during which the Financial Consultant has assisted in working out a large number of financing plans for industry building plants in our State. This has been a successful period, even with Industrial Revenue Bond availability in several of our competing states. Attractive plans of financing have often made the difference between gaining or losing a new plant.

Close contacts continue with such organizations and agencies as The Business Development Corporation of North Carolina, Small Business Administration, Economic Development Administration, and others which have directly assisted in the location of numerous plants. Relationships with insurance companies and other commercial lenders are good and new potential sources of financing continue to be developed.

In addition to industrial financing, the Financial Consultant has assisted in the formation of several local development corporations. These corporations play a major role by participating in financing industrial buildings at the local level.

# FOOD INDUSTRIES

The objectives of the Food Industries Consultant are to work toward the development of the food processing industry in North Carolina in any appropriate way. The Consultant works with out of state firms interested in North Carolina facilities, with existing firms planning expansions, with groups interested in firms planning expansions, with groups interested in establishing new locally owned processing firms, and in developing firms allied to or serving the food industry.

Investments in food processing facilities and allied activities were at an all time high during this biennium. The work of the Consultant can be seen in many of these investments.

Close contact is maintained with several agencies capable of concrete assistance to efforts here. Among these are the Food Sciences Department of North Carolina State University, North Carolina Department of Agriculture, and the United States Department of Agriculture.

# SEAFOOD INDUSTRIES

The Seafood Industries Consultant works in the overall field

of seafood industries development, including the attraction of new processing firms, but a great deal of the effort is spent toward improving the marketing of our fisheries production.

During the biennium much has been accomplished toward unifying the fisheries industry in the general upgrading of all its activities, with emphasis on marketing. The North Carolina Fisheries Association has been organized and during the biennium voted a system of self-assessment to provide funds to promote the common good and advancement of the industry.

As a result of interior activity of the seafood industry, with guidance and direct effort by the Seafood Industries Consultant, new markets are being developed, existing firms are being upgraded and expanded and new processors are entering the business.

This biennium has seen marked improvement in North Carolina's seafood industry. With existing organization and continued effort, further improvement will be seen.

# DIVISION OF TRAVEL AND PROMOTION

Continuing efforts to promote North Carolina as a destination for both foreign and domestic travelers, together with work toward establishing a system of welcome centers along major highways leading into the State, dominated activities of the Travel and Promotion Division during the 1966-1968 biennium.

Division activities during the first half of the biennium were under the leadership of the Travel and Promotion Committee of the Board of Conservation and Development, headed by C&D Chairman J. W. York. Serving with Mr. York were John Harden of Greensboro and Arthur G. Corpening Jr., of High Point. In mid-biennium, Chairman York combined the Travel and Promotion and Parks committees to form the new Parks and Tourism Committee. Committee members, in addition to Messrs. York, Harden and Corpening, are Moncie L. Daniels, Jr., of Manteo, Gilliam K. Horton of Wilmington and Oscar J. Sikes, Jr., of Monroe.

According to the annual Copeland Survey, spending by travelers in the State during calendar 1967 rose to a record \$647 million, an increase of \$37 million over the previous year. Of the total, \$408 million was spent by out-of-state visitors. Total receipts of firms engaged in serving and transporting travelers, including the amount spent by local customers in their own trade areas, reached an all-time high of \$1.4 billion.

Of paramount importance during the period was a \$100,000 annual increase in the Division's advertising budget, boosting to \$525,000 the annual allocation for both travel and industrial advertising.

# TRAVEL MISSIONS

Recognizing the growing importance of the international traveler, the Division placed increased emphasis on strengthening North Carolina's competitive posture in the world travel market. Two trade missions were conducted to Europe and a third to the Orient. The travel advertising program was expanded to include select foreign publications. Plans also were formulated during the period for a State-sponsored mission to South America in November, 1968.

A three-week mission to Paris, Rome, Geneva, Zurich, Hamburg, Stockholm, Amsterdam and London was launched in October, 1966. Thirty-seven Tar Heels, each paying his own way,

participated in the mission. North Carolina travel programs were presented in each of the cities for the press, travel agents and carrier representatives.

The Division also participated in an eleven-state mission to Europe in October, 1967. The mission was sponsored by the Southern Travel Directors Council, of which North Carolina is an active member. Travel industry leaders from throughout the South, accompanied by an authentic Dixieland band, visited Hamburg, Copenhagen, Brussels, Munich, Rome, Madrid, Paris and London.

In April, 1968, the Director conducted travel seminars in Tokyo, Hong Kong and Honolulu.

The Division also cooperated with the Travel Council of North Carolina, Inc., in a week-long mission to Florida in January, 1967. Led by the State's first lady, the mission visited Orlando, Tampa, Sarasota, Palm Beach, Fort Lauderdale, Daytona Beach, St. Augustine and Jacksonville.

# WELCOME CENTERS

Construction of North Carolina's first two welcome centers began in mid-February, 1968. The centers, approved by the 1967 General Assembly, are located on Interstate highways 85 and 95 near the Virginia line. Both are expected to be in operation by August 1, 1968.

Mrs. Sara Harison of Atlanta, Ga., joined the Division on August 1, 1967, as supervisor of welcome centers. She served in a similar capacity with the Georgia Tourist Division. Hostesses who will staff the centers were employed in May-June, 1968, and immediately began an extensive training program to become familiar with the State's travel and vacation opportunities. The program included a statewide tour of travel facilities.

Both welcome centers are identical of traditional design, each contains about 2,800 square feet of floor space, most of which will be taken by the reception area. Here, travel literature, weather information and scenes from various sections of the State will be displayed. The centers will be open year-around from 8 a.m., to 5 p.m., except during the peak travel months of summer when longer hours will be required.

A request for funds to construct five additional centers was made to the Advisory Budget Commission in July, 1968.

# SPECIAL PROJECTS

The Division continued to work closely with the Travel Council of North Carolina, the National Association of Travel Organizations, U. S. Travel Service, chambers of commerce, local development organizations and various other individuals and groups interested in promoting the travel industry.

In June, 1967, the Division sponsored a tour of the piedmont and mountain regions by a group of travel editors from nationally prominent newspapers and magazines. Publications represented by the tour guests included Better Homes and Gardens, The Dallas Morning News, Christian Science Monitor, Holiday, The Boston Globe, Southern Living, The Toronto Telegram and Vista, publication of the Humble Travel Club. As a result of the tour, North Carolina stories appeared in each of the publications.

A number of new and revised publications were produced during the period. Among these were "North Carolina, The Goodliest Land Under the Cope of Heaven," the Division's principle promotional booklet, and "North Carolina, Golf State U.S.A.," a complete directory of golfing facilities in the State. Both booklets are illustrated by full-color photographs. "The Goodliest Land" has been hailed by travel industry leaders as one of the most effective travel guides in the country. Other activities for which new publications were developed include skiing, camping, auto racing and equestrian sports. Dozens of other publications and information bulletins were revised during the period.

A long playing record of North Carolina short stories was produced and distributed to the State's broadcast media. Also produced during the biennium were five new travel posters featuring North Carolina scenes. Three of the scenes—a rain forest in the Great Smoky Mountains, Low Falls on the Cullasaja River and a "down east" fish fry—were taken from "The Goodliest Land" booklet. Other scenes featured in new posters are Greenfield Gardens at Wilmington and golf in the Sandhills.

The Division coordinated the 1967 Southern Governors' Conference at Asheville, attended by the Governors and their chief aides from 14 Southern states. In addition to the 450 conference delegates, the event was attended by some 85 representatives of the press, radio and television.

In cooperation with the Greater Nags Head Chamber of Commerce, the Division hosted the Southeastern Outdoor Press Association on October 6-8, 1967. Publicity on the State's outdoor recreation opportunities was excellent throughout the biennium as a result of the Division's outdoor promotion program. Two groups of outdoor writers were hosted by the Division in 1967 and 1968 at Fontana Village.

More than a score of the nation's leading travel writers assembled at Kill Devil Hills in mid-December, 1967, for a meeting of the Middle Atlantic Chapter of the Society of American Travel Writers. The meeting was held in conjunction with the 64th anniversary of powered flight. The writers came to North Carolina at the invitation of the Travel and Promotion Division.

On May 14, 1968, Governor and Mrs. Moore were guests of honor at a "North Carolina Regional Night" dinner at the Overseas Press Club in New York. The dinner and informal program, featuring North Carolina food products and gifts, was attended by some 150 newsmen and their wives. Many of the food items, which included barbecue, hush puppies and cole slaw, were prepared in North Carolina and flown to New York.

A campaign to increase travel by North Carolinians within their own state was launched the following month. Newspaper advertisements and radio announcements featuring Tar Heel attractions were mailed to all newspapers and radio stations in the State. The campaign received endorsements of the North Carolina Press Association and the North Carolina Association of Broadcasters.

The Division also cooperated with the States of South Carolina and Georgia in Spring, 1968, in the production of a 14-minute color movie entitled "Dixie Golf Circle." The movie features golf in the three states and will be shown throughout the world in theatres of Paramount Studios, as well as becoming a part of the Division's film library. North Carolina areas featured in the movie are Pinehurst, Linville, Grandfather Mountain, Blue Ridge Parkway, Biltmore House and Sapphire Valley.

Division personnel escorted dozens of travel and outdoor writers during the period, produced radio and television programs, presented travel programs to various civic and business organizations and assisted local groups in developing special travel events.

# TRAVEL SHOWS

Participation in regional and national travel shows remained an integral part of the Division's work during 1966-68. The Division participated in the Canadian National Exhibition, largest annual fair in North America, in 1966 and 1967 at Toronto, Ontario, the International Vacation and Travel Show at Jacksonville, Fla., in 1967 and 1968; the American and Canadian Sportsman's Vacation and Boat Show, Cleveland, Ohio, in 1967; and the Chicago National Boat, Travel and Outdoor Show in 1967.

A new state travel exhibit was being built at the close of the biennium. It was expected to be used for the first time in August, 1968, at the Canadian National Exhibition.

# MEDIA LIST

North Carolina travel advertising was published or broadcast in the following\*:

# **NEWSPAPERS**

Atlanta Magazine Baltimore News-American Baltimore Sun Birmingham News Charleston Gazette-Mail Charleston News & Courier-Post Chicago Sun-Times and Daily News Chicago Tribune & Daily American Christian Science Monitor Cincinnati Enquirer Cleveland Plain Dealer Cleveland Press Columbia State Columbus Dispatch Detroit News Florida Magazine Ft. Lauderdale News Greenville News Jacksonville Times-Union

Atlanta Journal-Constitution

Louisville Courier-Journal Times Miami Herald Newark News New York World-Journal-Tribune New York News New York Times Orlando Sun-Sentinel Philadelphia Bulletin Philadelphia Inquirer Pittsburgh Press & Post-Gazette Richmond Times-Dispatch News St. Louis Globe Democrat St. Louis Post Dispatch Tallahassee Democrat Tampa Tribune-Times Washington Daily News Washington Post Washington Star Wilmington News-Journal

\* In-state media not used at the request of N. C. Press Association and N. C. Association of Broadcasters.

#### MAGAZINES

Better Homes & Gardens Bride and Home Canadian Travel Courier Esquire Executive Magazine Financial Post Golf Golf Canada Golf Digest

Knoxville News-Sentinel

Golf World Holiday Life National Geographic National Observer New York Times Magazine New York Times Nat'l. Economic Review New Yorker Reader's Digest RX Golf and Travel Salt Water Sportsman Southern Living Sportfishing Sports Illustrated

Time Time-Canada True Fishing Annual Venture Wall Street Journal

# INDUSTRIAL ADVERTISING

Area Development Business Management Business Week Nation's Business Time Wall Street Journal

# INQUIRIES SERVICED

Received 316,817

Keyed 130,582 Non-Keyed 186,235

# **PUBLICATIONS**

Produced

No. Subjects 104 No. Copies 1,167,331 No. Copies 2,305,018

# NEWS, FEATURE & PICTURE OPERATIONS

News & Feature Releases 126

TV-Radio Shows 154

Still Photography Prints Distributed 11,731

Motion Pictures Audience Showings 7,483

TV 451

# SPECIAL PROJECTS

No. Projects 556 Literature Used 236,683 Homeseeker Inquiries 2,715

# BIENNIUM JULY 1, 1966-JUNE 30, 1968

Media Newspapers, Magazines No. Advertisements 279 in 74 publications

TOTAL ADVERTISING COST

\$839,372.64

NOTE: Travel and Industrial Development advertising prepared by The J. T. Howard Advertising Agency, Raleigh

\* Unlike previous reports, inquiries serviced during the 1966-68 biennium do not include those received from school children and other non-travel sources.

# DIVISION OF GEODETIC SURVEY

The Division of Geodetic Survey started this biennium with a backlog of computations to be sent to Washington. After the purchase of a new electronic calculator, the computations have been completely caught up and we are now keeping up with the projects currently being made in the field.

In the past two years, we have established 1,039 control monuments, or a total to date of 3,084. We have sent computations on 2,553 monuments to Washington, which brings the total to date sent to Washington of 2,934. In return, we have received from Washington the final published data on 1,299 monuments, or 23%.

A special request was received for the establishment of a true North-South base line for testing aircraft gyro stabilizer at Seymour Johnson Air Force Base, and horizontal and vertical control at Yadkinville for the erection of an antenna for a new radio station.

A technical paper on the Division's Organization and Techniques was presented at the annual convention of the American Congress on Surveying and Mapping in Washington. The invitation to present the paper was a tribute to the high quality of accuracy in the work carried out by this division.

North Carolina was one of the first states to create a geodetic survey division. The State's efforts have long occupied a position of national prominence, and the division has been cited frequently for accuracy and preciseness. As a result of this reputation, the director of the division was invited to a meeting in Lansing, Michigan, of the Consulting Engineering Society on Legislature pertaining to geodetic survey. This was in the form of a panel discussion, and the object was to create a geodetic survey division in the State Michigan.

The division is always ready to cooperate with cities, towns, other government agencies, airports, power companies, etc. in assisting them in the needed control in their areas, and to further the North Carolina Coordinate System throughout the State.

# DIVISION OF MINERAL RESOURCES

# PROGRAMS AND ACTIVITIES

The primary function of the Division of Mineral Resources is to acquire, assimilate and distribute basic scientific data and information relating to the state's geology, mineral resources and topography. Its role is to serve industry, agriculture and commerce; to provide consulting services to other state agencies, and to serve the individual taxpayer directly wherever possible by answering his inquiries and informing him about our geology and mineral resources.

The activities of the Division and its program of work fall into four major catagories; (1) services, (2) geologic research, (3) cooperative programs and (4) regulatory activities. A summary of the major activities in each of these catagories follows:

#### SERVICES

Each year hundreds of requests for information relating to geology and mineral resources are received. These requests come from school children, teachers, private citizens, land owners, mining companies, petroleum companies and other sources too numerous to list. The information required to answer these inquiries varies from a series of standard form letter replys to comprehensive technical reports. A considerable amount of the staff's time is required to answer these inquiries. However, the furnishing of this information is an important part of the Division's program and each inquiry is answered as thoroughly as possible.

The identification and evaluation of rock and mineral specimens submitted by land owners, prospectors and rockhounds continued at a high level during the biennium. North Carolina has long been famous for its unusually large variety of rocks and minerals. The collecting of rock and mineral specimens as a hobby, or avocation, attracts many new enthusiasts each year. At the request of land owners, staff geologists examined a number of individual mineral occurrences and furnished the property owner an evaluation of the potential for economic development. Investigations of this type are limited to cursory examinations and to advise the property owner as to whether or not further

geologic investigations seem justified, and if so, the procedure he should follow.

# GEOLOGIC RESEARCH

Geologic research conducted by the Division of Mineral Resources consists mainly of detailed geologic mapping and studies relating to the occurrence, distribution and utilization of mineral resources.

Geologic maps are essential in prospecting for and developing new mineral deposits. However, geologic maps serve many other purposes not directly related to mining and mineral resources. For instance, geologic information is essential in the selection of stable dam sites and reservoir impoundments, highway construction, foundation studies, groundwater supplies and numerous other land use problems. Knowledge of the geologic factors that affect the suitability of a given area for underground or buried waste disposal, the location of specified industrial facilities such as nuclear power plants, and irrigation and drainage systems is steadily increasing in importance. Geologic and mineral resources information is becoming increasingly important in urban planning to assure adequate supplies of essential mineral materials and to avoid geologic hazards.

During the biennium the Orange County geologic mapping project was completed, mapping in McDowell County continued and new mapping initiated in the Winstead 15-minute quadrangle, and in the Leicister, Weaverville and Oteen 7½-minute quadrangles.

Mineral commodity studies on garnet and mica schist were continued. The study on pyrophyllite was completed and the results published as Bulletin 80, "Pyrophyllite Deposits in North Carolina." The metallagenic study of the Carolina Slate belt was also continued.

In July 1966 funds became available to add a geologist with special training in subsurface geology to the staff of the Division. This is the first step in organizing a coordinated study of the stratigraphy and economic geology of the Coastal Plains section of the state, and is considered a significant step forward in the Division's geologic research capabilities.

Twenty-two graduate students at the University of North Carolina and North Carolina State Univerity received research grants from the Division's Special Projects fund during the biennium. The grants ranged from \$75.00 to \$600.00 and were

used by the students primarily for field expenses, rock thin sections and small items of equipment and supplies in connection with their thesis problems.

# COOPERATIVE PROGRAMS

Cooperative programs were continued with the Geological Survey and the Bureau of Mines, U. S. Department of the Interior. Matching fund programs with the Geological Survey consisted of geologic mapping and mineral resources studies in the Roxboro 15-minute quadrangle in Person and Granville counties, togoraphic mapping in parts of Yadkin, Forsyth and Alamance counties and a new program initiated in 1967, subsurface geologic studies in the Coastal Plain. Through the Coastal Plains cooperative program, cores and cuttings from seven test wells in the Pamlico River, drilled by Texas Gulf Sulphur Company and North Carolina Phosphate Corporation, were studied and described. Logs of the seven test wells were placed on open file.

Programs with the Bureau of Mines include the collection of mineral production statistics and a clay and shale testing program to locate and evaluate potential raw material for use in the ceramic industry. During the biennium, 35 clay samples were collected and submitted to the Bureau's Tuscaloosa laboratory for pyrochemical testing and economic evaluation.

# REGULATORY ACTIVITIES

Oil and Gas Conservation Act

The Oil and Gas Conservation Act of 1945 designates the Department of Conservation and Development as the state agency responsible for carrying out the provisions of these statutes. Part I of the Act regulates the drilling and the plugging of abandoned holes.

During the biennium, the 10 exploratory holes drilled by the North Carolina Oil and Gas Company were plugged and abandoned in accordance with the rules and regulations established by the Board of Conservation and Development. Also, sample cuttings representing 12,891 feet of drilling from the holes were collected along with geophysical logs. The logs and cuttings have been placed on open file.

# MINERAL LEASES

On July 11, 1967 the State of North Carolina, upon the recommendation of the Board of Conservation and Development, granted a marine minerals exploration lease to Marine Mining Corporation, Norwood, New Jersey. Under the terms of the lease agreement, Marine Mining Corporation has the exclusive right to explore for mineral deposits, excepting oil, gas and sulphur, on state-owned submerged lands in parts or all of Beaufort, Carteret, Craven, Onslow and Pamlico counties. The primary term of the lease agreement is four years. During August and September, 1967, Marine Mining Corporation conducted a geophysical survey throughout the area of their lease. The survey was run on about 1,500 miles of survey lines and a continuous recording seismic (Sparker) method was used.

On September 27, 1967, the five year option-to-lease period expired on the option held by Texas Gulf Sulphur Company and Dresser Industries on state-owned submerged lands underlying the Pamlico and Pungo rivers in Beaufort and Hyde counties. Prior to the expiration dates, both companies notified the state of their intent to exercise the options and enter into a 25 year lease agreement. Subsequently, the lease documents were drawn and each company now holds a 25 year phosphate mining lease on their respective areas. The Texas Gulf Sulphur Company lease area underlies the Pamlico River and contains 9,209 acres, more or less. The Dresser Industries lease area underlies the upper portion of the Pungo River and contains 16,132 acres, more or less.

On December 4, 1967 the state offered for lease, on a sealed bid basis, 5,492 acres of submerged lands under the Pamlico River for the purpose of developing a well method of mining phosphate. No bids were received to lease the area and in January 1968 the Board of Conservation and Development recommended that the area be withdrawn for lease.

The 1967 General Assembly passed the Interstate Mining Compact Enabling Act, which was endorsed by the Board of Conservation and Development and introduced at the request of the Dept. of C & D. The Compact is an effort to control the undesirable environmental effects of all types of surface mining operations and at the same time assist in maintaining a competitive and effective mineral industry. The Compact provides for the establishment of a Mining Council, which

acts as an advisory body to the Governor in matters relating to mining and other compact responsibilities.

In November 1967, the thirteen members constituting the Mining Council were appointed. Since that time the Mining Council has been actively engaged in studying the mining industry in North Carolina to determine if state surface mining legislation is needed at this time.

# MINERAL PRODUCTION

During each year of the biennium, mineral production continued a significant upward trend and established record high values. In 1966, mineral production was value at \$71.8 million and in 1967 at \$77.1 million. This represents a 28.2 percent increase over the preceding biennium and strongly reflects the increasing importance of the mineral industry to the state's overall economic development.

Principal commodities mined, in order of decreasing value, were stone, sand and gravel, phosphate rock, feldspar, mica, lithium minerals, clay and talc. It is significant to note that during this period phosphate rock was produced for the first time and immediately became one of the state's major mineral commodities. Stone continued to be the most important product comprising about 50 percent of the total. Leading mineral producers were Superior Stone Company, Ideal Cement Company, Vulcan Materials Company and Texas Gulf Sulphur Company.

In 1966, North Carolina ranked first among the states in the production of lithium minerals, feldspar and scrap mica; second in the production of olivine and crushed granite; and third in talc.

As reported by the U.S. Bureau of Mines, mineral production figures include only the mine value of the mineral product and do not consider any value added by processing or manufacturing. However, if the value of the state's mineral production was combined with the value added by processing and manufacturing, plus the value of stone and glass products manufactured in the state from both imported and native mineral products, it is conservatively estimated that the average annual value of the mineral based industries to the economy of North Carolina is in excess of \$175 million.

TABLE 1.—MINERAL PRODUCTION IN NORTH CAROLINA

Mineral	19	1966	1	1967
	Quantity	Value (thousands)	Quantity	Value (thousands) <sup>2</sup>
Barite short tons		:::	200	9\$
Clays <sup>8</sup> thousand short tons	3,381	\$ 2,241	2,977	2,012
Feldspar long tons	301,610	3,157	265,690	3,113
Gem stones	NA	15	NA	25
Mica:				
Scrap short tons	63,480	2,348	69,639	1,751
Sheet	4,500	H	4,500	W
Sand and gravel thousand short tons	11,601	11,132	10,014	9,962
	22,377	36,136	24,473	41,028
Talc and pyrophyllite short tons	113,366	576	109,393	513
Value of items that cannot be disclosed: Asbestos, cement, clay (kaolin), lithium minerals, olivine, phosphate rock, stone (crushed and dimension marshe and				
dimension slate)	XX	16,272	XX	18,685
Total	XX	71,878	XX	77,094

#### DEVELOPMENTS IN THE MINERAL INDUSTRY

The completion of Texas Gulf Sulphur Company's phosphate mining, milling and fertilizer chemical facilities highlighted developments in the mining industry during this period. In July 1966, the Lee Creek mine was brought into full scale production and the chemical complex facilities were completed early in 1967. Investment in the TGS Lee Creek mine, mill and related fertilizer material plants exceed \$90 million.

The mine is rated at an annual capacity of 3 million tons of phosphate concentrate. Approximately one half of the mine production is used internally to produce calcined phosphate, triple superphosphate, diammonium phosphate, phosphoric acid and super phosphoric acid. The remainding phosphate concentrate is available to U.S. and world markets by rail, barge and deep sea shipments.

In order to facilitate the deep sea shipment of phosphate, the North Carolina State Ports Authority undertook a major expansion program at its Morehead City port. Bulk handling facilities including a 106,000 ton capacity warehouse and a conveyor loading system capable of handling 2500 tons of phosphate rock per hours were completed in July 1968, at a cost of \$11.4 million.

In the fall of 1967, Ranchers Exploration and Development Corporation, Albequerque, New Mexico, took an option to purchase the Hamme tungsten mine, located near Townsville, Vance County. The property, which contains proven and probable reserves of about 1 million tons of tungsten oxide ore is owned by the Howmet Corporation, but was closed in 1962 because of the depressed price of tungsten.

Evaluation studies are now underway to determine the feasibility of reopening the mine. As of June 30th, the mine had been dewatered to below the 1300 foot level, new hoisting equipment had been installed and preliminary underground studies were in progress. Ranchers mining engineer estimates that costs required to reopen the mine and to install new crushing and milling facilities will be on the order of \$3.3 million, and a work force of about 200 employees will be required. The reopening of this mine would be an important boost to the economy of Vance County.

During the period covered by this report, North Carolina Oil and Gas Company drilled ten exploratory holes in Pender, Onslow and New Hanover counties in their search for oil and gas. The location and depths of these holes are as follows:—

MacMillan No. 1, located in Pender County, 0.6 mile southeast of U.S. Highway 17 at Vista. Total depth 1,462 feet.

Lea No. 1, located in Pender County, 0.75 mile northwest of Hampstead. Total depth 1,255 feet.

Sheppard No. 1, located in Onslow County, 1 mile northeast of Haw. Total depth 1,275 feet.

Justice No. 1, located in Onslow County, 1 mile east of Sneads Ferry. Total depth 1,680 feet.

Fort Fisher No. 1, located in New Hanover County, 0.5 mile south of Fort Fisher. Total depth 1,558 feet.

International Paper No. 2, located in Onslow County, 1.6 miles southwest of Verona. Total depth 1,403 feet.

Baucom No. 1, located in Onslow County, 2.1 miles southwest of Verona. Total depth 1,418 feet.

Evans No. 1, located in Onslow County, 2.8 miles southwest of Verona. Total denth 1,368 feet.

Sullivan No. 1, located in Pender County, 1.5 miles northwest of Surf City. Total depth 1,472 feet.

Spicer No. 1, located 1500 feet northwest of U.S. Highway 17 at Folkstone. Total depth unconfirmed, hole abandoned before completed.

The last hole was drilled in September 1967 and apparently terminated the exploration activities of North Carolina Oil and Gas Company. Original funds raised to finance the exploration program have been depleted and efforts to obtain additional funds were not successful.

Bear Creek Mining Company conducted an exploratory drilling program for possible copper and other mineral deposits on approximately 900 acres of optioned land in Cabarrus County. Drilling failed to prove an economic ore body and the project was terminated in the spring of 1967.

A considerable amount of acreage including and surrounding the Moss-Richardson, Bov Scout-Jones molybdenum prospects in Halifax County was optioned by Bear Creek Mining Company and New Jersey Zinc Company. Both companies did some exploratory drilling on their respective properties during 1967. The results of the drilling programs are unknown, but this area continues to be a prime area for potential metal deposits.

Texas Gulf Sulphur Company conducted an exploratory drilling program for possible sulfide mineral deposits on approximately 1000 acres of optioned land a few miles northwest of Chapel Hill, Orange County. Drilling apparently failed to delineate an economic ore body and the project was terminated in June 1967 and the options were dropped.

# DIVISION OF FORESTRY

#### ADMINISTRATION

On March 20, 1967, a major reorganization of the Division was announced. Primary objectives were to free top staff members from operational routine to allow long-range program planning, and to begin staff planning for expansion of programs in small ownership forestry. The central office staff structure was changed to allow for this and to more realistically serve the field organization. The old branches of Forest Fire Control, Forest Management and Forest Pest Control were abolished. New branches of District Operations, Field Projects, Forest Engineering, and Administration were created. There were several promotions, and several new positions were added to the State Forester's staff. The new organization chart provides for orderly expansion into new and accelerated programs for the next several years.

The State is now organized into three Forestry Regions, these being the Coastal Plains, Piedmont and Mountains. Each has a Regional Forester in charge of the Division's entire program in his Region. These men supervise thirteen District Foresters who are responsible for the work in an area of about one to two million acres of timberland involving from four to nine counties. The District Foresters have one to four supervisory assistants. There were ninety-four counties cooperating with the Forestry Division as of June 30, 1968.

#### DISTRICT OPERATIONS

#### Forest Fire Control

In terms of man-hours, expenditures, and problems, the prevention and suppression of forest fires continues to be the Division's leading activity. The last two years can best be characterized in two ways; an increasing number of fires and strong emphasis on the control of the large blow-up fire which cause much of the total loss.

More and more, people are living in the suburbs and rural areas, while working in urban areas. With this population shift has come a growth in forest fire occurrence caused by inexperienced persons using fire without realizing the hazards involved. At the same time, there is an alarming increase in

deliberately set forest fires. The reasons for this increase are complex and at present not fully understood by the Division.

During this biennium, the Division began using large multiengine air tankers, on contract, to supplement its established fleet of small support tanker aircraft. The large air tanker, capable of carrying two thousand gallons of fire retardant, supported by an intensive ground fire suppression system, is directed at the prompt control of the potentially large destructive fire. In the Spring of 1967 and 1968, these aircraft are credited with the saving of three hundred and seventy-five thousand acres of North Carolina forest land by delivering strong initial attacks on fires which could not have been checked by conventional suppression methods.

The following photographs and graph of fire occurrence illustrates the nature of the present fire problem in North Carolina.

#### FOREST FIRE STATISTICS

Area under	1964	1965	1966	1967					
protection—acres	17,279,400	17,507,100	17,819,500	17,819,500					
Number of fires	3,366	4,691	4,626	5,501					
Causes of Fires									
Lightning	50	31	41	25					
Campfire	70	86	100	99					
Smoking	817	1,263	1,062	1,255					
Debris burning	1,200	1,484	1,624	1,740					
Incendiary	572	769	865	$1,\!137$					
Machine Use	253	333	356	535					
Miscellaneous	399	725	578	710					
Area_Burned									
Forest Land	33,571	47,678	119,391	96,079					
Open Land	3,972	18,327	6,614	4,366					
Total	37,543	66,005	126,005	100,445					
Damage									
Forest Land	\$640,200	<b>\$1,</b> 668,730	\$4,178,685	<b>\$</b> 3,362,76 <b>5</b>					
Law Enforcement Number of fires resulti									
Law Enforcement Acti	on 163	135	167	153					
Finances—Fiscal Year	1964-1965	1965-1966	1966-1967	1967-1968					
Total Funds	\$2,403,718	\$2,881,163	\$3,037,550	\$3,437,023					
Per Acre protected	13.91c	16.45c	17.05c	19.29					

# Forest Management

The major objective of the Division's forest management program is to increase the productivity of the 15,688,800 acres

of forest land owned by the 245,000 farmers, business and professional people and other small private woodland owners who own less than 500 acres in North Carolina. Eighty-five percent of the present timber cut is coming from these non-industrial ownerships.

It is essential that the seventy-nine percent of the State's forest land owned by this group be placed under better forest management. Professional forestry advise and technical forestry services are provided by the Division to assist this large group of landowners to grow more and better timber crops on their forest land. Consultant Foresters and private contractors are encouraged to provide these services to the larger landowners.

It is equally important that wood production be integrated with the increasing competition for our forest resources to provide water, wildlife, recreation, and other social benefits required by an expanding population.

During the biennium, the Division's foresters devoted fifty-two man-years in servicing 17,132 landowner requests for forest management assistance. Thirty foresters spent over seventy-five percent of their time on this work. Seventy-five of our eighty-seven county rangers were given comprehensive in-service training in forest management to improve our sub-professional capability. Four of these men completed this course and were reclassified as Forestry Technicians, the same grade assigned to graduates of accredited state ranger schools.

The statistics below list our accomplishments prior to and during the biennium and also list the total forest management accomplishments through this report period.

## SUMMARY OF FORESTRY ASSISTANCE

Accomplishment	Period 1946-66	During Bienniu 1966-68	m Total To Date
No. of Examinations Made	52,144	17,132	69,276
Total Woodland Acres Examined	3,190,453	284,106	3,474,559
No. of Tracts Marked for Cutting	17,237	5,355	22,592
Acres Marked	203,312	25,572	228,884
Board Feet Marked	474,746,000	54,150,000*	528,896,000
Cords Marked	291,824	85,277*	377,101
Acres of Planting Assistance	211,818	14,600	226,418
Landowners Provided Contractual			
Forestry Services		532**	
Acres of Contractual Forestry			
Practices Carried Out		8,966**	
Requests for Services Not Acted	Upon	505	

<sup>\*</sup> Volumes shown include 5,311,500 board feet and 10,940 cords of trees salvaged on Southern pine beetle infestations.

\*\* This total includes acres treated by the Division's custom forestry crews and acres referred to and treated by private contractors.

# Cooperative Programs

The Division of Forestry participates in, and provides technical forestry guidance and assistance, to numerous federal, state and local programs and projects. They include the Watershed Protection and Flood Prevention Program (PL-566), Appalachian Regional Development Program, Coastal Plains Economic Development Program, Resource Conservation and Development, Agricultural Conservation Program (ACP) and County Technical Action Panels and Economic Development Groups.

Two Appalachia Foresters contribute to the economic improvement of the Appalachian counties by accelerating forest management and forest products processing.

Three Watershed Foresters advise and assist landowners in improving hydrological conditions in PL-566 Watersheds by accelerating reforestation and forest management. An important phase of this program is the reduction of soil erosion by tree planting and land treatment of critical erosion areas.

The efforts of these few specialists is expanded by implementing these programs through the regular field organization throughout large portions of the State.

### Pest Control

The objective of the Pest Control Branch of the Forestry Division is the reduction of timber mortality and growth loss due to insects and diseases. In addition to the routine functions of training, detection, and investigation, pest control personnel have been involved with four particularly significant forest pests. These were the southern pine beetle, balsam woolly aphid, white pine blister rust and oak wilt.

The southern pine beetle, a small bark beetle which kills pine trees continues to be the most serious forest pest in North Carolina. Recently confined to the Piedmont section, the beetle has now moved into the eastern section of the State in epidemic proportions. Continual aerial surveys are being made to detect beetle-killed trees. The Division's efforts in combating this outbreak destroys the insects and also enables the landowners to receive a return for the trees which have been killed. During the period of this report an estimated 5,311,500 board feet of sawtimber and 10,940 cords of pulpwood were salvaged. This returned approximately \$165,595 to the landowners involved

and resulted in protection of over two million acres of susceptible timber type.

The balsam woolly aphid situation has not changed significantly during the last two years. The control efforts made to protect approximately one hundred acres of fir in Mount Mitchell State Park continues to give satisfactory results. Recent surveys detected no aphids in areas that had received control measures.

The oak wilt disease caused by a fungus has been known to be present in North Carolina since 1951. During these fifteen years, it has remained confined to five mountain counties—Buncombe, Haywood, Madison, Swain, and Jackson. Annual detection and control measures have been very effective resulting in a reduction of total number of infected trees to very low levels.

White pine blister rust, another fungus disease, is considered as being endemic in North Carolina. Continuous checking and small amounts of control work are completed to keep the disease from causing undue losses. An attempt is made to prevent new white pine plantations from being established in areas where they will be attacked by this disease.

#### FIELD PROJECTS

Bladen Lakes State Forest

The Bladen Lakes State Forest, a thirty-six thousand acre demonstration of practical forestry practices, continued to serve as an example and training area for students, Foresters, and private landowners.

Since its inception in 1939, all projects and programs have been completely supported from forest receipts. At no time have any tax funds been used for its operation, development, or expansion.

During the biennium, receipts from the sale of forest products totaled \$481,987. Of this amount \$18,581 was paid to the county of Bladen in taxes and \$7,323 was turned over to the local District fire control organization to provide intensified fire protection. In addition, the State Forest continued to provide complete financial support for the operation and expansion of the longleaf pine portion of our Tree Improvement Program.

A partial list of major expansion and protection projects instituted or completed during the biennium would include: 1,033 acres disced for planting; 186 acres chopped and burned for planting; 1,402 acres planted to selected species; 83 acres

regenerated through natural techniques; 429 acres of young pines released from competing low-grade hardwoods; one mile of new road constructed; 3,500 acres burned with prescribed fires; 160 miles of road shoulders disced on both sides; and over 720 prevention letters sent to local residents as fire prevention measures.

Even though extremely hazardous conditions existed at times, no fire of any consequence burned on the State Forest during this period.

#### Nurseries

The Division of Forestry operates four forest tree nurseries located in Burke, Henderson, Johnston, and Wayne Counties. During the biennium, over ninety million seedlings were produced and distributed. This represents an increase of twenty-two million trees distributed over the 1964-66 biennium.

Land has been purchased in Avery County on which a Fraser fir-hardwood nursery will be located for production of tree seedlings for the higher elevations of western North Carolina. The Division of Forestry is assisting the growing Christmas tree industry through the production of species suitable for this purpose.

The pulp and paper industry increased its demands for custom grown seedlings. Approximately thirty million seedlings were produced for this industry on a custom basis during the period.

More emphasis is being placed on the production of selected hardwood seedlings. The goal is to produce species suitable for all forest sites in the state in need of planting.

The following tabulation shows the total sale of seedlings by fiscal years:

 Years
 1964-65
 1965-66
 1966-67
 1967-68

 Total Forest Seedlings Sold
 31,803,300
 36,379,400
 43,303,000
 46,709,900

# Hardwood Program

Field trips to various southern, mid-western, and eastern states have pointed out the lack of knowledge and little activity in the field of hardwood forestry. With a large segment of North Carolina's wood-using industry dependent on hardwoods, the Division of Forestry is placing great emphasis on research and development of regeneration methods applicable to selected hardwood species.

At the present, three programs of hardwood research are either in progress or in the development stage. These are:

A work-study program in cooperation with Virginia Polytechnic Institute to establish and study hardwood plantings, and to support findings on species-environmental relationships.

The N. C. State University Hardwood Research Program which involves basic hardwood tree improvement work and has the combined efforts of thirteen member organizations. The Division of Forestry has joined this program in 1968.

A hardwood species-site study in cooperation with the Southeastern Experimental Station of the U. S. Forest Service. This controlled study should produce basic information on species regeneration in western North Carolina.

The aim of the Division of Forestry is the regeneration and production of higher volumes of high-grade hardwoods for the future use of the hardwood industry.

# Tree Improvement

Seed orchards are now established on Division of Forestry properties in Bladen, Burke, and Wayne Counties. There are a total of 105 acres now in pine orchards. Species included are white, longleaf, loblolly, shortleaf, Virginia, and pond pine.

In addition to the above, a Fraser fir seed orchard is one-half complete on newly acquired property in Avery County.

Experimental work in hardwood tree improvement has begun, and it is anticipated that small sycamore and red gum orchards will be established within the next year.

Work has also begun on a pitch pine orchard to produce seed for certain mountain sites.

# Forestation Activities

The need of small, private landowners for equipment and manpower to carry out various timber stand improvement activities has been recognized; and where private contractors are not available or lack the necessary equipment, the Division of Forestry will offer assistance in this work.

As a means of promulgating this assistance, two drum choppers and two tractor mounted mist blowers have been purchased. These units will be rented to private contractors in North Carolina, and will be used to convert hundreds of acres of non-productive woodland to high valued forests. Custom planting

of tree seedlings has been started in areas of the state lacking private planting crews.

Future plans call for greatly increased emphasis in these new activities.

#### FOREST ENGINEERING

The primary function and responsibility of the Forest Engineering Branch is to provide broad engineering services to the Forestry Division's field of activities and programs. Work of this branch falls into three primary divisions of Land Transactions; Construction and Maintenance of Improvements; Forestry Equipment, including communications, equipment and aircraft.

A four hundred seventy-four acre tract of land was acquired in Avery County to serve as a Mountain Facility to include a mountain nursery, hardwood development center, Mountain Regional Headquarters and Training Facility. An addition of thirty-three and one-half acres of land was acquired for the Claridge Nursery in Wayne County.

During the biennium, twenty small sites for field administrative units or lookouts towers were acquired by purchase or retained by renewal of leases.

Major buildings completed include a district office, a tower residence, and a large shop and storage building. Four large open-frame equipment shelters were constructed at district head-quarters sites. Two combination equipment shelter-county head-quarters buildings were completed and three more are under construction. Five new lookout towers have been erected and five others moved to new locations.

The Division now owns fifteen forest fire control aircraft for reconnaisance, cargo, and air tanker service. The primary ground equipment for fire suppression is a fleet of sixty-three crawler tractor-fire plow units with transport trucks. These units and our several hundred pick-up trucks are supported by a communications system consisting of over a thousand two-way voice radios.

# DIVISION OF COMMERCIAL AND SPORTS FISHERIES

#### LAW ENFORCEMENT SECTION

Law enforcement inspectors are assigned a car and an outboard motorboat. The cars are equipped with a two-way radio which is interchangeable from cars to the boats. These boats are used in patrolling the sounds, bays, creeks, and rivers under our jurisdiction for violations of Fisheries Laws and Regulations. There are also four large patrol boats (38 to 45') class) which are used in patrolling the coastal fishing waters of the inland sounds and the ocean. These boats are equipped with two-way radios and one is equipped with radar.

Inspectors are responsible for patrolling and posting over 46,000 acres of shellfish growing areas which are closed by the State Board of Health due to pollution. Law enforcement personnel cooperate with the Shellfish Sanitation Section of the State Board of Health in the enforcement of their laws and regulations.

During the past two years, inspectors gathered oyster samples from sixteen areas each month for the Pesticide Program conducted by the Institute of Marine Sciences and water and sediment samples for N. C. State University Laboratory. Statistics have been compiled on industrial fish landings during this biennium and, in addition, inspectors assisted the U. S. Bureau of Commercial Fisheries in obtaining statistics on the foodfish landed. They continued to check seafood dealer's operations and landings for illicit seafood such as undersized oysters and crabs.

Law Enforcement Personnel assisted the Research and Development Section in their oyster rehabilitation program in the relaying of oysters and the planting of shells and marl and kept these areas posted. This unit also supervised the relaying of shellfish from polluted waters to private oyster and clam bottom leases.

In 1967, the Division purchased a radar-equipped, four-wheel drive truck which is used for patrolling the beaches to prevent trawling in the restricted areas of the ocean.

Two patrol planes are used very effectively in the enforcement of commercial laws and regulations due to the fact that they can cover vast areas of waters in a short period of time. These efforts are coordinated with the inspectors in cars and outboard motorboats and also with the larger patrol boats by the two-way radio system.

In addition to regular patrol duties, patrol planes surveyed all dragline and dredging operations in or on publicly owned tidelands, beaches, and marshlands and navigable waters within the State. Information concerning these operations was relayed to the N. C. Department of Water and Air Resources to determine whether or not the dredges or draglines were registered. Inspectors and pilots also checked the dragline and dredge operators to see if they had the proper permits and if not, the Corps of Engineers was notified.

During this biennium, equipment replaced consisted of boats, 9 outboard motors, 4 trailers, 16 cars, 4 radios, and 2 (671) Grey Marine Diesels. Additional equipment included 2 citizens band radios, 3 fuel tanks mounted on trailers for fueling our patrol planes, and a 1,000 gallon gasoline tank and pump which was installed at the Morehead City office for the Division vehicles.

#### FISHERIES PRODUCTION

Shellfish Shrimp (lbs.) heads-off Crabs, Hard (lbs.) Crabs, Soft (doz.) Oysters (bu.) Clams, Hard (bu.)	$1966-67 \\ 3,355,697 \\ 16,421,433 \\ 28,164 \\ 116,533 \\ 29,375$	$1967-68 \\ 2,370.940 \\ 15,283,385 \\ 21,766 \\ 92,373 \\ 19,536$
Clams, Rangia (bu.) Scallops, Bay (gal.) Scallops, Calico (gal.)	10,111 31,806 265,893	8,081 93,337 3,158
Finfish Food, all (lbs.) Menhaden (lbs.)	38,123,608 191,582,289*	36,318,3 <b>9</b> 2 144,645,063*

Roat Licenses	$T \cap T \wedge T$	FINES.	@4 040 50	@1 750 OC

TOTAL ARRESTS: Guilty: Not Guilty: Nol Prossed: Prayer for Judgment: Defendant Deceased: Cases Dismissed: Appealed:	593 526 11 16 8 2 14	TOTAL COSTS:	Suspended \$5,461,25—\$66.40 Suspended
Licenses Suspended:	43		
Licenses Revoked:	2		

<sup>\*</sup> No figures available for June, 1968

## RESEARCH AND DEVELOPMENT SECTION

The task of obtaining scientific information to intelligently manage the fisheries found in North Carolina's tremendous expanses of salt water, so coastal commercial and sport fishermen can make the biggest catches year after year, has been entrusted to the Research and Development Section.

This formidable task is handled in many ways. Major endeavors of the biennium are listed below: however, other activities, such as continued observation of coastal alterations, are part of R&D's program. During this biennium the R&D Section, established in 1964, has grown from six to 16 staff members. The Section now consists of six separately budgeted sub-sections or programs: (1) Administration, (2) Shrimp Studies, (3) Exploratory Fishing, (4) Oyster Rehabilitation, (5) Oyster Studies, and (6) Publications. With the continuing awareness of the value of the State's commercial and sports fishery, growth and accomplishments will continue at a rapid rate.

## CAN MORE NORTH CAROLINA SHRIMP BE HARVESTED?

There is concern in North Carolina as to whether the shrimp resource is being utilized to best advantage. Many persons express the opinion that opening of shrimp season should be delayed to allow shrimp to reach larger sizes, and, therefore, command higher prices. But, at the present, there is no concrete information about how big shrimp should grow before the shrimp season is opened so fishermen can make the most money possible each year.

To obtain this information, it is first necessary to understand more about shrimp; specifically, how fast they grow, what kills them, and where they travel when they migrate. The gathering of this information, then, is the basic aim of the Shrimp Studies project.

There are three kinds of commercial shrimps in North Carolina; the white, the pink, and the brown. All three are similar for the most part, but their life cycles occur at different times of the year. Mature adults spawn in the ocean. Young shrimp migrate toward shore and enter the estuaries through the inlets when about ¼-inch long. As the young shrimp approach maturity, they migrate out of the estuaries back to the ocean, thus completing a cycle.

So, the importance of estuaries to commercial shrimping cannot be over-emphasized. Young shrimp are present in the estuaries throughout the year due to different species being there during different seasons.

Shrimp were captured, marked, and released alive while they were in the estuaries. Then when fishermen later caught marked shrimp and returned them to the biologist, he could study growth, mortality, and migration. During the biennium, 29,102 shrimp were marked and released in Pamlico, Core and Bogue Sounds and Cape Fear River, and 4,973, or 17%, were caught and returned by commercial fishermen.

Results of this study during the biennium show all three species move generally from the estuaries toward waters of higher salinity, and in the ocean they exhibited a definite southward pattern of migration along the coast. In no case were marked shrimp caught by fishermen very far eastward or northward from where they were released, nor did any appear to have re-entered estuaries after once reaching the ocean.

A migration record of 345 miles was made by two shrimp released in the Cape Fear River and recovered off St. Augustine, Florida. The pink and brown shrimp populations appear to be more native to North Carolina, whereas the major white shrimp population from the Cape Fear River area apparently contributes to the shrimp fishery off South Carolina, Georgia and Florida.

Growth studies indicate brown shrimp reach a size of  $4\frac{1}{8}$  inches (70 shrimp per pound with heads off) in 12 weeks, then grow to  $4\frac{5}{8}$  inches (50 headless per pound) in two to three more weeks. When they reach 7 inches (15 headless per pound) they are an average maximum size.

Shrimp die by natural causes and by fishermen catching them. Total mortality estimates with brown shrimp indicate as much as 71% of the population in one study area were removed each week by the combined effects of fishing and natural causes.

# SEARCHES FOR MORE SEA FOOD

A sleek fishing-research vessel bearing the name of Governor Dan Moore steamed from its home port at Morehead City in February of 1968 and began a career of exploratory fishing along coastal North Carolina. The 85-foot vessel is rigged and equipped to do any of the commercial fishing that takes place in North Carolina; in fact, it can be used to try gear not presently used.

The goal of the exploratory fishing project, using the R/V  $Dan\ Moore$ , is to use the vessel and personnel in various exploratory fishing operations to help commercial and sport fishermen of this state better utilize our marine fishery resources. Personnel aboard the vessel consists of two biologists and seven crew members.

The *Dan Moore* has completed ten exploratory cruises in search of commercial quantities of fish, scallops, lobsters, shrimp and clams. Preservation and quality control experiments have been conducted, a Federal aid project to study anadromous fish is underway, and coordinated research with other marine institutions has been carried out. In the near future the *Dan Moore* will engage in a study of the controversial trash fish fishery in North Carolina.

# WHAT IS BEING DONE TO HELP THE NORTH CAROLINA OYSTER INDUSTRY?

For countless years people in North Carolina have removed oysters from their natural habitat and in doing so have removed much of the materials young oysters need for attachment and survival. To help off-set this trend of taking from the sea and giving nothing in return, a program of Oyster Rehabilitation was inaugurated in 1947 and has continued to this time.

To better understand the need for an oyster rehabilitation program, a basic knowledge of the oyster's life history is required. For example, during a single reproductive season a healthy adult oyster can produce over 100,000,000 eggs. Shortly after the eggs are fertilized they develop into tiny organisms no larger than specks of dust. For a period of one to two weeks these minute oysters actively swim throughout their watery domain and are transported by tidal currents. Near the end of their swimming stage they will seek out a suitable solid object on which to adhere and form their shells. If a favorable material is not found in a relatively short time they will perish. It is a proven fact that one of the major reasons why only a very small fraction of young oysters survive is simply because there are insufficient attachment materials available.

Essentially, the oyster rehabilitation program consists of two similar operations, both designed to increase oyster production in North Carolina. The first segment consists of scattering great numbers of solid objects in estuarine areas where oysters are known to grow and survive well. Oyster and scallop shells have been traditionally used for this purpose because of their availability in certain locations and because young oysters readily attach to them. The second segment of this program consists of removing small live oysters from polluted waters and from slow growing areas and transplanting them to waters better suited for growth.

During the biennium more than 429,000 bushels of shells were planted and approximately 183,000 bushels of oysters from polluted waters and from slow growing areas were relocated. To accomplish such an extensive program a large expenditure of money is necessary; however, the total amount available is only a small fraction of what is needed. Some expenditures of oyster rehabilitation funds have been shown to yield investment returns of five and six dollars annually to oyster fishermen for each dollar spent in certain areas. So, from an economic standpoint, the oyster rehabilitation program is a money making investment.

A new phase of this program, utilizing marl as a substitute for shells, was initiated in 1968 when it became evident that shells in some areas were becoming increasingly scarce. Small scale experiments have indicated that young oysters find marl a suitable attachment material. Marl is an earthly deposit that contains a substantial amount of calcium carbonate, the same substance oyster and scallop shells are composed of. Thus far, approximately 444 tons of marl have been planted in several coastal counties. If this marl planting proves successful a more extensive program will be undertaken in the future.

# GROW OYSTERS OFF THE BOTTOM.... IS IT PRACTICAL?

It has been observed many times and in many different countries that oysters suspended off the bottom grow much faster and have a greater survival rate than those living on the bottom. To test the feasibility of growing oysters off the bottom in North Carolina estuaries, an Oyster Studies Project was undertaken in 1967 with partial funding from the Federal Government.

Experiments are being conducted in four estuarine areas where oysters occur naturally. The project includes experimenting with various kinds of materials to which oysters may attach and grow. Several plates, about the size of floor tile, are rigged on a slender shaft and suspended vertically in the water. Through this research we hope to determine the best possible

material for oyster attachment and to learn more about oyster growth and survival. Practical application of this knowledge could possibly result in greater commercial production of oysters in North Carolina.

Results of these investigations during the biennium are being printed and will soon be available to other biologists and interested persons. It is with continued research and the practical application of the findings that biologists, in cooperation with local oystermen, can go far in reversing the downward trend of oyster production in North Carolina.

#### INFORMATION GETS INTO PRINT

The Publications Section is responsible for written communications and pictures released to the public by the Research and Development Section. The section continued to prepare and distribute the quarterly *Commercial Fisheries Newsletter* as its main source of contact with all North Carolina fishermen. During the biennium a photography darkroom and equipment were added. Pictures are developed quickly to fulfill a number of needs in addition to the Newsletter. A series of booklets on various North Carolina fisheries, called Fisheries Notes, was initiated and the first one, on the hard clam, was prepared and published. Fisheries Notes on flounders and on N. C. fishing gear and methods near completion.

News releases, feature articles, and photographs on research and development activities have been prepared and distributed to newspapers and magazines throughout the state and country during the biennium. Work has been started on a booklet of North Carolina salt water sport fish. Weekly scrap fish data are also collected by the section and analyzed statistically every three months.

The last two years have seen this section step up its activities considerably, and with photographic equipment to work with, and a full schedule of new publications planned, more and more information will get into print.

# DIVISION OF STATE PARKS

Conservation in its truest and broadest sense embraces a multitude of ideas, responsibilities, and actions. It encompasses every phase of natural history and includes provisions for dealing with both renewable and nonrenewable resources. Our constantly changing world is exerting pressures that are challenging conservationists for new approaches as well as for expansions of proposed and existing programs.

The major program of the Division of State Parks is one whereby HUMAN RESOURCES are conserved through an active program of conserving NATURAL RESOURCES. The pressures of our affluent society demand implementation of ways and means of proper use of leisure so that mind and body can remain united.

The Division of State Parks has stated, time and again over the years, that no conservation program can possibly be successful unless it places the same emphasis on recreational and aesthetic use of natural resources as is on forest management, wildlife protection, water conservation and other programs. This stand is now reiterated. Our landscape is rapidly vanishing as we sit idly by, twiddling our thumbs, and philosophy that there is plenty of time to act—no need to hurry. Our own selfishness and lack of concern has already denied our future generations their rightful heritage to enjoy many unique portions of the unscarred landscape.

Our responsibility, TO SERVE THE PEOPLE OF NORTH CAROLINA AND THEIR VISITORS, can only be met by:

- (1) PRESERVING AND PROTECTING NATURAL AREAS OF UNIQUE OR EXCEPTIONAL SCENIC VALUE NOT ONLY FOR THE INSPIRATION AND BENEFIT OF THE PRESENT GENERATION BUT FOR GENERATIONS YET UNBORN. This, the BASIC SERVICE, should always be foremost. North Carolina is truely a land of variety with its contrast of ocean expanse and majestic mountains. No state in Eastern America can boast of the diversity of ecosystems that are possessed by North Carolina.
- (2) THE ESTABLISHMENT, DEVELOPMENT AND OPERATION OF STATE PARKS WHICH PROVIDE FOR RECREATIONAL USE OF NATURAL RESOURCES AND OUTDOOR RECREATION IN NATURAL SURROUNDINGS. Establishment of areas properly utilizing portions of our landscape still available to us can be established which will provide recreational opportunities through all forms of our natural resources.
- (3) THE PORTRAYAL AND INTERPRETATION OF PLANT AND ANIMAL LIFE. GEOLOGY AND ALL OTHER NATURAL FEATURES AND PROCESSES INCLUDED IN THE VARIOUS STATE PARKS AND NATURAL AREAS. The worth of natural areas as

educational and interpretive tools has already been proven beyond question through public school groups, colleges, and the thirst exhibited by park visitors.

(4) THE PRESERVATION, PROTECTION AND PORTRAYAL OF SCIENTIFIC SITES OF STATEWIDE IMPORTANCE.

### PROGRESS REPORT

The work of the Division of State Parks is divided into nine major phases:

- 1. Operation for Public Use
- 2. Maintenance
- 3. Interpretive and Public Use Programs
- 4. Protection and Law Enforcement
- 5. Business Management
- 6. Information and Education
- 7. Personnel Administration
- 8. Planning, Development and Construction
- 9. Cooperation with and Services to Other Agencies

Progress in these nine phases of work is summarized as follows:

# I OPERATION FOR PUBLIC USE

Public use continues at an ever increasing pace. For the second straight biennium over four million visitors have been recorded and represents an increase of 6.65% over the previous biennium.

Camping continues to be one of the leading activities and recorded a 17.74% increase over the preceding biennium. Other activities registering increases were: Picnicking 5.52%; swimming 7.74%, cabin days 7.53% and fishing 27.24%.

Family use of state parks is by far the most dominating and is significant in judging quality of park use. Secretary of the Interior, Stewart Udall, recently said, "Our goal should be to accomplish both full production and the full life. . . . A national prosperity that will include prosperity of the human spirit." Our contribution to the "full life" and to the "prosperity of the human spirit" is through the beauty, contentment, challenge and resolve offered in the natural environment of State Parks.

## II MAINTENANCE

There are approximately 300 buildings in the State Park system that are over ten years old. New structures and facilities are constantly being added through the Capital Improvements program. It is therefore, obvious that maintenance demands a major portion of both time and money. Structures and signs require repair and painting; new signs, picnic tables, and fireplaces have to be made; repair and extension of fire, truck, hiking, and nature trails is necessary as is constant check on water and sewage systems.

Many structures have passed the point where repair is no longer practical but must still be maintained because of the lack of replacement funds.

Field personnel continue to do an outstanding job in their maintenance programs and deserve much credit in reducing major repairs to a minimum.

#### III INTERPRETIVE AND PUBLIC USE PROGRAMS

One of the basic purposes of State Parks is to interpret and portray the natural environment. Many visitors come solely to relax, sightsee, and participate in the many phases of the interpretive program. Thoreau has written, "Our life would stagnate if it were not for the unexplored forests and meadows around it. We need the tonic of the wilderness. We can never have enough of nature. We must be refreshed by the sight of inexhaustable vigor, vast and titanic features, the seashores with its wrecks, the wilderness with its living and decaying trees. . . ." It is through the interpretive program that the visitor can visualize the landscape of eons past, absorb the tranquility of the present, and reflect an understanding of the biodynamics of nature.

Marked growth has been recorded in the interpretive program this biennium as in the last. The number of scheduled illustrated talks has been increased as well as continued improvement on trails, interpretive devices, and other services.

In an ever continuing effort to improve and expand interpretive services, a naturalist training school was again conducted with emphasis given to interpretive techniques and methods and applications of individual skills.

As in the past, several parks offered swimming and life saving courses. These courses are always well received and appreciated.

#### IV PROTECTION AND LAW ENFORCEMENT

Preserving and protecting our outstanding scenic and natural areas not only for the benefit and enjoyment of the present generation but for all future generations is a vital and integral part of our State Park program. These natural areas must be protected from fire, pestilence, vandalism, trespass, and encroachment. Wildlife must be protected from hunting, trapping, and other forms of molestation. Even though it is sometimes necessary to issue citations and occasionally make arrests, educational law enforcement is our primary aim and has proved to be most effective against littering and many forms of vandalism.

During this biennium there were only three forest fires—Morrow Mountain had ½ acre to burn; Hanging Rock, 3 acres; and William B. Umstead, 20 square feet.

The boreal forest at Mount Mitchell is still being threatened by constant attack from the Balsam Woolly Aphid which has already killed hundreds of thousands of trees in the Mount Mitchell area. Selected spraying is being conducted in an effort to protect a portion of this forest. Contamination studies are being conducted to determine what, if any, insecticide buildup is occurring in the spray areas.

A serious outbreak of Southern Pine Beetle was recorded at Cliffs of the Neuse State Park and has been controlled so far through a combined program of cutting and spraying.

## STATE LAKES

The Division of State Parks is repsonsible for the administration of seven state-owned lakes; Black, Jones, Salters, Singletary, and White Lakes in Bladen County; Lake Waccamaw in Columbus County, and Lake Phelps in Washington and Tyrrell Counties.

The Division places and maintains safety pilings to protect swimming areas, issues permits for and regulates construction of piers and launching ramps and enforces the State Lake Regulations. These regulations are designed for the protection and preservation of the lakes for recreational benefit of present and future generations.

The Wildlife Resources Commission is responsible for boating regulations under North Carolina's Boating Safety Law. Personnel of the State Parks Division and the Wildlife Resources Commission work cooperatively in the regulation of boat usage on the lakes. The Division purchased a wildlife frequency radio to aid in coordination of efforts at White Lake where boat use is greatest and the safety problem is most acute.

The clean-up of the bed of Black Lake, begun in 1966, proved to be a monumental task and work is still going on.

Spillway gates were planned for Lake Waccamaw but their construction was delayed when the appropriation for this purpose was found to be inadequate.

#### V BUSINESS MANAGEMENT

Even though the Department Auditor's office has assumed the responsibility of the Division's accounting functions, a vast amount of time is still involved on all levels of operations for the accounting of expenditures and receipts; purchasing and requisitioning, property accounting, payrolls and cost records, and many other items. Records and reports are constantly being reviewed in an effort to increase efficiency and effectiveness.

#### VI INFORMATION AND EDUCATION

This phase of State Park operation is becoming more and more important. More schools, colleges, and individuals have engaged in natural history studies in our State Parks than ever before and with renewed demands for formally conducted studies.

Radio, television, newspapers and magazines have all given excellent coverage to our State Parks.

Raleigh office and field personnel continue to present programs to civic clubs, women's clubs, garden clubs, and camping and professional organizations. New informational materials are being prepared for future distribution.

Thousands of inquiries have been received during the biennium and when possible, have been answered the same day they were received.

### VII PERSONNEL ADMINISTRATION

The dedication, pride, and integrity possessed by State Park employees is strongly reflected in every action they take and are instrumental in the strong organization and quality of service that exists. In order to keep informed and increase efficiency, Park Superintendents' meetings were held as well as specialized training sessions for all employees.

# VIII PLANNING, DEVELOPMENT AND CONSTRUCTION

In September, 1967, the planning section of the Division of State Parks merged with Forestry's engineer to form the Engineering Services Section of the Department of Conservation and Development. The report dealing with this phase of operation will be reported by the Engineering Services Section.

Land acquisition for the biennium is as follows:

## LAND ACQUISITION

July 1, 1966 — June 30, 1968

State Park	Purchased From	Date	Acreage	
CLIFFS OF THE NEUSE	Bessie Hodges Byrd William McKinley Griffin E. I. Wiggins Dallas W. Price	12/8/66 1/5/67 6/5/67 2/6/68	35.5 39.17 12.29 51.08	
MOUNT JEFFERSON	Town of West Jefferson	4/11/68	0.48*	
WEYMOUTH WOODS	Mile-Away Farm, Inc.	2/26/68	9.99	

<sup>\*</sup> Denotes gift

# IX COOPERATION WITH AND SERVICES TO OTHER AGENCIES

The Division of State Parks continues to cooperate in various ways with many public and private agencies and several institutions of higher learning.

Division personnel have spent considerable time working with the Pilot Mountain Preservation and Park Committee that is working toward the establishment of Pilot Mountain as a State Park and with the Stone Mountain Committee that is hoping to establish Stone Mountain, located in Wilkes and Alleghany Counties, as a State Park. Much effort has been expended in working with the U. S. Army Corps of Engineers in planning for the establishment of State Recreational areas on proposed Reservoirs.

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#### THE GOAL

"Let us proclaim a creed to preserve our natural heritage with rights and the duties to respect those rights:

The right to clean water—and the duty not to pollute it.

The right to clean air—and the duty not to befoul it.

The right to surroundings reasonably free from man-made ugliness—and the duty not to blight.

The right to easy access to places of beauty and tranquility where every family can find recreation and refreshment—and the duty to preserve such places clean and unspoiled.

The right to enjoy plants and animals in their natural habitats—and the duty not to eliminate them from the face of this earth."

Lyndon B. Johnson

# A. PROVIDE LAND PURCHASE FUNDS FOR THE ACQUISITION OF NEW STATE PARK AND RECREATIONAL LANDS:

Funds are needed to complete land acquisition within existing State Parks in order to eliminate interior holdings and irregular boundaries and thus provide better buffer and protection zones as well as provide for better development opportunities. Funds are needed to purchase and develop state park lands so that all people of the state may benefit from services offered by the State Park System. The acquisition of certain natural and scenic areas must be done in the immediate future to save them from destruction.

# B. PROVIDE SUFFICIENT TECHNICAL PERSONNEL REQUIRED FOR THE SOUND PLANNING AND DEVELOPMENT OF THE STATE PARK SYSTEM:

The only economical, efficient and practical way to develop a State Park system is to have a complete complement of trained, efficient technical personnel to plan all phases of State Park activities. To further improve their abilities, sufficient funds must be provided in order that these personnel may gain extra knowledge through various professional short courses and workshops that are offered. The demand being made on our areas for additional natural science education from both the general public as well as public schools, institutions of higher learning, graphically illustrate the immediate need for additional interpretive personnel if this responsibility is to be met.

# C. PROVIDE SUFFICIENT CAPITAL IMPROVEMENTS APPROPRIATION TO COMPLETE LAND ACQUISITION AND DEVELOPMENT AT EXISTING STATE PARKS:

Because of irregular boundaries and/or interior holdings, several parks are subjected to unnecessary dangers of fire, vandalism, hunting and trespass. These same conditions also eliminate the possibility of future orderly development. Many facilities within existing state parks are over taxed and grossly outdated and are in desperate need of replacement. Many new public facilities need to be added in order to meet existing and growing demands.

# D. PROVIDE THE INCREASES IN THE STATE PARK MAINTENANCE BUDGET NECESSARY TO ADEQUATELY MAINTAIN AND OPERATE THE EXISTING STATE PARKS FOR PUBLIC USE:

Funds are still insufficient to adequately maintain and operate the State Parks. This is being further aggrevated by the tremendous increase in visitation that is being recorded each year. If our quality of service is to be maintained it is imperative that these funds be increased. Funds also need to be made available that will enable the creation of programs designed to provide for public use of the natural feature of the parks.

# E. PROVIDE FUNDS FOR THE DEVELOPMENT OF NEW STATE PARK AND RECREATIONAL AREAS:

Once acquired, new state park and recreational areas will need public use facilities, adequate access, parking areas, water and sewage facilities and maintenance and service areas.

All of these recommendations should be carried out in strict accordance with PRINCIPLES GOVERNING THE ESTABLISHMENT, EXTENSION AND DEVELOPMENT OF THE STATE PARK SYSTEM OF THE STATE OF NORTH CAROLINA.

The 1967 General Assembly, at the suggestion of the Department of Conservation and Development, created the State Parks and State Forest Study Commission. This commission is charged with the responsibility of evaluating the existing State Park system and making recommendations to the next legislature on future expansion of the State Park System whereby the citizens of the state will be afforded adequate outdoor recreational opportunities. It has long been apparent that this State needs to do more in providing recreational areas, preserving scenic rivers, establishing nature preserves consisting of unique ecosystems and creating more State Parks.

RECORD	
USE	
PUBLIC	
PARKS	
STATE	

State Park	T. Atte	Total Attendance	Picni	Picnickers	Can	Camper Family	Days Organized	pez	Swimmers	mers	Hil	Hikers	Cabins	ins	Fish	Fishing
	FY-67	FY-68	FY-67	FY-68	FY-67		FY-68 FY-67	FY-68	FY-67	FY-67 FY-68	FY-67	FY-68	FY-67	FY-68	FY-67 FY-68 FY-67 FY-68	FY-68
Cliffs of the Neuse	156,376	163,165	51,307	55,104	7,567	8,446			26,046	26,749	11,205	11,613			231	355
Duke Power	125,536	90,240	25,703	17,048					20,040	15,434	1,091	2,299			5,294	6,173
Fort Macon	598,190	613,798	24,446	21,270					98,975	103,687	4,957	5,317			39,017	44,057
Hammocks Beach	7,406	10,787	1,684	2,297	30				1,386	1,356	1,273	2,724			1,991	3,254
Hanging Rock	177,700	174,333	62,008	58,079	25,610	24,687			35,982	28,294	21,810	20,742	3,230	3,289		
Jones Lake	57,095	69,377	43,236	57,499	776	926			9,509	12,260					72	181
Morrow Mountain	356,438	380,912	142,577	143,676	18,321	20,283			18,451	17,597	44,782	36,661	2,516	3,170	7,591	8,378
Mount Jefferson	36,743	41,384	11,982	13,001							16,174	16,241				
Mount Mitchell	308,460	274,953	54,039	49,463	3,997	2,850					41,922	27,122				
Pettigrew	20,595	21,493	4,534	3,864	653	200									2,753	3,531
Singletary Lake	5,112	4,587					2,918	2,117							133	63
Weymouth Woods	623	795									678	746				
William B. Umstead	300,553	335,961	111,549	107,755	13,050	13,296	22,487 2	21,586			37,711	33,200			7,952	7,712
	2,150,827	2,181,785	533,065	529,074	70,004	70,718	25,405 2	23,703	210,389	205,377	181,603	156,665	5,746	6,459	65,035	70,704

# DIVISION OF COMMUNITY PLANNING

"We selected our site for a county hospital and spent quite a bit of money for test borings and title search. The owner of the property next to it then announced he was going to sell his land for a quarry. Can we protect our hospital site and our new consolidated high schools against the establishment of an incompatible use right next to them?"

"What can we do to insure that new subdivisions are platted with the minimum lot sizes required for the wells and septic tanks to be used, and the minimum right-of-way required if the Highway Commission is ever going to take over their maintenance?"

"Last year our city ripped up three new streets to put in water mains. How can we do a better job of coordinating improvements such as these?"

"Ever since our new industry came to town, we've really been growing. Are we setting aside adequate land for parks and schools? Will we end up with a system of roads and a pattern of land use that makes sense? Or do we just have to hope for the best?"

"Our rural County is next to a metropolitan area. We are beginning to get a lot of "spillover" development, particularly of uses that would not be allowed in the metropolitan area. What can we do to protect ourselves from being a dumping ground, as it were, for development that wants to avoid the metropolitan area's land use controls?"

Questions such as these are being asked more and more frequently by members of City Councils and County Commissioners in North Carolina. This is because North Carolina is in transition from a rural to an urban way of life.

There were 434,000 more people living in the cities of North Carolina in 1960 than there were in 1950, while the State as a whole increased its total population by only 60,000 more than that. Nor does that 434,000 include those people living in subdivisions just outside our city limits. Urbanization, whether it takes place inside or outside city limits, brings with it service demands and problems that scattered farm development did not present. These problems can be handled, however, and our State is fortunate that it is just in the process of urbanization. If we can meet the challenge, the urban North Carolina of the

years ahead will be an attractive, healthful, convenient, and economic community for all its people.

Part of the answer to the questions raised at the beginning of this article lies in an active community planning program. A planning program analyzes the resources, possibilities and needs of the community, prepares a plan for the future development of the area, and designs local ordinances and programs (zoning, subdivision regulations, capital improvements program, etc.) that will guide future growth toward the planned development goal.

In the Housing Act of 1954, the U.S. Congress recognized the need for planning in small communities and also recognized that such communities usually lack the staff and financial resources to undertake a comprehensive planning program on their own. Section 701 of that Housing Act (as subsequently amended) provides a State agency with matching grants, for the provision of technical planning assistance to cities under 50,000 population and counties regardless of size. The grant normally pays two-thirds of the cost of the program while the remaining one-third is provided by the community being assisted. The North Carolina Department of Conservation and Development, through its Division of Community Planning, provides this assistance to North Carolina communities.

The "701 program," as it is referred to, has been a popular one in our State. Between 1957, when the Division of Community Planning was authorized by the General Assembly, and June, 1968, a total of 63 grant projects has been approved by the U. S. Department of Housing and Urban Development for North Carolina. These projects have involved a total of \$3,500,000 in local funds and in Federal matching grant funds. Under these projects, 191 communities have been assisted with comprehensive planning programs, usually during a two-year project period. Many communities now have been in three or four succeeding projects, reaching back to the early days of the 701 program.

The staff of the Division of Community Planning consists of 26 planners and 26 back-up personnel located in four area offices across the State. A significant amount of the planning assistance under the 701 program is also being provided, under subcontract, by such public agencies as the Western North Carolina Regional Planning Commission, the Research Triangle Regional Planning Commission, and by private planning firms. Through this program, local governments can also get financial

support for the employment of their own planning staff. As of June 30, 1968, a total of 116 communities were currently receiving assistance through the local planning assistance program in North Carolina. Eighty-six were being assisted by staff of the Division while the other 30 were being assisted by local public staff or private consulting firms.

When a planning program is undertaken, a planner meets monthly with the planning board appointed by the local government body; together they work on the studies, plans and ordinances that are needed in that particular community. A typical beginning planning program would include base mapping, a study of the population and economic conditions and prospects, a land use survey and analysis, a development plan, and the implementation measures of zoning and subdivision regulations. The development plan is the key element. It identifies the most appropriate areas in and around the community for future residential, commercial and industrial use; the best locations for future parks, schools, fire stations and other facilities; and, finally, a system of major roads that will relieve present congestion and serve this future development pattern. After the beginning planning program, subsequent two-year projects might involve a plan for all community facilities in the area, for the central business districts, for annexation, or other development problems of pertinence in that locality.

In addition to providing technical assistance to local planning boards, the Division of Community Planning has completed some statewide studies. Among these are published reports on "Local Development Policies: A Survey of Current Practices in North Carolina;" "Off-Street Parking for North Carolina Cities;" "Commuting Patterns in North Carolina, 1960;" "Legal Considerations in Control Business District Planning and Development;" and "The Effect of Education Facilities on the Surrounding Area: A Study of Five School Locations in North Carolina."

During the 1966-68 biennium, two six-month training programs in community planning were conducted by the Division. Eleven North Carolinians with bachelor's degrees in related fields were employed and put through an intensive program consisting of 330 hours of classroom instruction, 93 hours of field problems, and 324 hours of on-the-job training. Many State agencies and institutions assisted in the training, notably the Institute of Government. These trainees are now on the job

in the regional offices of the Division helping communities solve their development problems through comprehensive planning.

As comprehensive planning becomes established as a continuing part of the local governmental process in more and more communities, the value of planning becomes apparent. New subdivisions are going in at sound development standards. Needed portions of thoroughfare plans are being acquired ahead of need and in planned locations, and local capital expenditures are being programmed to relieve the strain on the taxpayer and to obtain the benefits of coordination. This "payoff" from planning will continue to increase as more city councils and county commissions turn to their planning boards for assistance with development problems. The growth of local planning in North Carolina has been facilitated by the understanding and cooperation of developers, subdividers, and private citizens all across the State. The difficult job of a local planning board would be an impossible one without enlightened community support, which has been forthcoming all across the State, with few exceptions.

## THE BUDGETS

## CONDENSED FINANCIAL STATEMENTS

For the Biennium Beginning July 1, 1966 and Ending June 30, 1968

Victor W. Barfield, Assistant to the Director

# MAINTENANCE FUNDS Statement of Receipts and Disbursements

		Fiscal Year 1966-67	Fiscal Year 1967-68
	Disbursements Receipts	\$7,435,744 2,649,161	\$8,224,659 2,710,410
Ger	eral Fund Appropriation	\$4,786,583	\$5,514,249
SUMI	MARY BY PURPOSE		
I.	ADMINISTRATION Disbursements Less: Receipts	\$ 222,448 1,416	\$ 318,011 51,393
	Appropriation	\$ 221,032	\$ 266,618
II.	COMMERCE AND INDUSTRY Disbursements Less: Receipts	\$ 554,791 104,509	\$ 701,205 29
	Appropriation	\$ 450,282	\$ 701,176
III.	TRAVEL AND PROMOTION Disbursements Less: Receipts	\$ 672,996 453	\$ 782,885 14,274
	Appropriation	\$ 672,543	\$ 768,611
IV.	GEODETIC SURVEY Disbursement-Appropriation	\$ 96,905	\$ 107,998
V.	MINERAL RESOURCES Disbursements Less: Receipts	\$ 90,956 3,949	\$ 108,380 14,458
	Appropriation	\$ 87,007	\$ 93,922
VI.	FORESTRY FIRE CONTROL Disbursements Less: Receipts	\$3,297,686 1,340,414	\$3,424,142 1,326,744
	Appropriation	\$1,957,272	\$2,097,398

VII.	GENERAL FORESTRY Disbursements Less: Receipts	\$	159,546 47,717	\$	171,945 66,584
	Appropriation	\$	111,829	\$	105,361
VIII.	FORESTRY MANAGEMENT Disbursements Less: Receipts	\$	322,246 171,740	\$	424,208 251,462
	Appropriation	\$	150,506	\$	172,746
IX.	NURSERIES Disbursements Less: Receipts	\$	360,524 319,394	\$	413,321 352,233
	Appropriation	\$	41,130	\$	61,088
X.	BLADEN LAKES STATE FOREST		001.004	•	
	Disbursements Less: Receipts	\$ 	231,806 241,517	\$	236,847 238,396
	Appropriation	\$	(9,711)	\$	(1,549)
XI.	STATE PARKS Disbursements	Ф	694.946	ø	COE 900
	Less: Receipts	ф —	634,346 164,926	\$ 	625,302 153,007
	Appropriation	\$	469,420	\$	472,295
XII.	COMMUNITY PLANNING— ADMINISTRATION				
	Disbursements Less: Receipts	\$	204,628 99,528	\$	162,337 51,156
	Appropriation	\$	105,100	\$	111,181
XIII.	COMMERCIAL AND SPORT FISHERIES				
	Disbursements	\$ _	586,866 153,598	\$	748,078 178,448
	Appropriation	\$	433,268	\$	569,630
XVI.	FUNDS TRANSFERRED FROM 1966-67				(12,226)

# RELATED BUDGETS MAINTAINED BY DEPARTMENT OF CONSERVATION AND DEVELOPMENT

# Statement of Receipts and Disbursements

	Fiscal Year 1966-67		cal Year 967-68
KERR RESERVOIR DEVELOPMENT COMMI	SSI	ON	
Credit Balance—Beginning Receipts	\$	11,261 32,836	\$ 2,184 28,877
Less: Disbursements	\$	44,097 30,500	\$ 31,061 19,800
Credit Balance—Ending	\$	13,597	\$ 11,261
KERR RESERVOIR DEVELOPMENT COMMI	SSI	ON	
Disbursements Less: Transferred From Special Fund	\$	72,801 30,500	\$ 62,306 19,800
Appropriation	\$	42,301	\$ 42,506

# AUXILIARY SUPPORTING FUNDS

# Statement of Receipts and Disbursements

	 scal Year 1966-67	Fiscal Year 1967-68	
DIVISION OF COMMUNITY PLANNING SPECIAL FUND			
Credit Balance—Beginning	\$ 150,427 587, <b>71</b> 6	\$	166,217 431,391
Less: Disbursements	\$ 738,143 571,926	\$	597,608 516,891
Credit Balance—Ending	\$ 166,217	\$	80,717
EXECUTIVE AIRCRAFT OPERATIONS SPECIAL FUND			
Credit Balance—Beginning	\$ 14,556 54,694	\$	7,253 62,480
Less: Disbursements	\$ 69,250 61,997	\$	69,783 67,489
Credit Balance—Ending	\$ 7,253	\$	2,244

#### MINERAL INTERESTS SPECIAL FUND

Revenue

Credit Balance—Beginning Receipts	\$ \$	$\frac{-0}{83,726}$
Less: Disbursements		12,096
Credit Balance—Ending	\$	71,630

# CAPITAL IMPROVEMENT FUND OF 1959

# Statement of Receipts and Disbursements

Appropriation—Public Laws of 1959 Less: Transferred to Department of	\$1,173,500 600,000		
Appropriation: Conservation and Dev Receipts			\$ 573,500 133,461
Total Receipts Total Disbursements			\$ 706,961 662,204
Unexpended Balance			\$ 44,757
Projects			
Development of Bear Island	Appropriation	Expenditures	Unexpended
State Park	\$ 172,000	\$ 165,845	\$ 6,155
Fort Macon Beach Erosion			
Control	151,926	151,919	7
Repairs to Buildings-Morrow	4 700	4 800	
Mountain State Park	1,500	1,500	0
Repairs to Building—Pettigrew State Park	7,000	6,993	7
Land Acquisition	179,702	160,238	19,464
Building—Little River Nursery	26,180	26,171	19,404
Irrigation System—Clayton Nursery	9,200	9,188	12
Irrigation System—Clayton Nursery .	9,200	9,100	12
River Nursery	18,955	18,955	-0-
Towermen Residence—Edgecombe			_
County	7,000	7,000	—0—
Towermen Residence—Southern	•		
Pines	7,000	7,000	-0-
Road to Mount Mitchell Tower Site	1,000	1,000	_0_
Tower Cabin—Mitchell County	3,000	3,000	-0-
Tower Cabin—Cleveland County	1,865	1,864	1
Tower—Caswell County	8,800	8,800	—0—

To Date

Tower—Pamlico County	7,745	7,745	-0-
Dam—Duke Power State Park	15,324	15,323	1
Boat "Cape Fear"	14,276	14,276	-0-
Barge "Rose I"	6,300	6,300	—0—
Transferred to Capital Improvement			
Fund of 1963	2,255	2,255	_0_
Phosphate Area Development	402	402	<del>-0-</del>
Report on Development of N. C.			
Mineral Resources	7,801	7,801	_0_
Beaufort County Phosphate Survey	4,530	4,530	-0-
Minerals Division Staff	13,524	13,524	-0-
Transferred to Special Fund,			
Code 26723	9,285	9,285	—0—
Boat Engines—Cape Fear II	4,000	4,000	_0_
Transferred to Code 66765	7,290	7,290	_0_
Unencumbered	19,101	0	19,101
Totals	\$ 706,961	\$ 662,204	\$ 44,757

# CAPITAL IMPROVEMENT FUND OF 1963

# Statement of Receipts and Disbursements

- 10 m					To Date
Revenue					
Appropriation—Public Laws of 1963 Receipts					,391,500 295,823
Total Receipts				\$1 1	,687,323 ,379,212
Unexpended Balance				\$	308,111
Projects—Forestry	Appropriation	Ex	penditures	U	nexpended
Lookout Tower—Pamlico County 8	§ 4,341	\$	4,341	\$	_0_
Headquarters Building—Hyde				·	
County	46,000		45,595		405
Shop Building—Hyde County	38,000		37,524		476
Equipment Shelter—Clayton	12,500		<b>12,</b> 500		-0-
Equipment Shelter—Chapel Hill	10,000		1,608		8,392
Radio Shop—Rocky Mount	7,500		7,495		5
Shop Building—Sylva	<b>51,</b> 500		51,498		2
Toxaway Road Maintenance	8,900		8,826		74
Four Equipment Shelters	38,000		30,204		7,796
Headquarters Building— Rockingham	62,000		61,942		58
Headquarters Building— Elizabeth City	58,500		58,493		7

Equipment Shelter-New Bern		12,000		11,995		5
Tower Ladders-Ashe and						
Yancy Counties		1,500		1,089		411
Lookout Tower-Robeson County		12,051		12,051		0
Residence—Sampson County		10,454		10,454		-0
Transferred to 1965 Appropriation	_	2,409	_	2,409	_	0
Total Forestry	\$	375,655	\$	358,024	\$	17,631
Projects—State Parks						
Cliffs of Neuse	\$	67,794	\$	65,009	\$	2,785
Fort Macon		340,272		$340,\!272$		—0—
Hanging Rock		104,863		97,578		7,285
Jones Lake		40,500		40,500		0
Morrow Mountain		72,483		72,481		2
Mount Jefferson		33,450		20,338		13,112
Mount Mitchell		193,749		135,219		58,530
Reedy Creek		38,017		38,017		-0-
William B. Umstead		62,072		61,857		215
Duke Power		150,000		149,917		83
	_		_		_	
Total State Parks	\$1	1,103,200	\$1	1,021,188	\$	82,012
Unencumbered	_	208,468		0		208,468
TOTALS	\$1	1,687,323	\$1	,379,212	\$	308,111

# CAPITAL IMPROVEMENT FUND OF 1965

# Statement of Receipts and Disbursements

## Revenue

Appropriation—Public Laws of 1965		\$	787,000
Transferred from Code 26021\$	50,000		
Federal Cooperation Fishing Vessel Equipment	18,750		
Transferred from Capital Improvement			
Fund of 1963	2,409		
Proceeds from Sale of Bannerman House	761		
Proceed from Sale of Stock by Mrs. James Boyd	11,579		
Land and Water Conservation Fund	188,359	_	271,858
Total Receipts		\$1	,058,858
Less: Disbursements		_	609,508
Unexpended		\$	449,350

# Projects—Commercial and Sports Fisheries

	Aı	propriation	F	expenditures	τ	nexpended
85-90 Foot Motor Cutter	\$	427,750	\$	427,033	\$	717
40-45 Foot Patrol Boat	_	35,000		35,000		0
Total Commercial and Sports Fisheries	\$	462,750	\$	462,033	\$	717
Projects—Forestry						
Lookout Tower-Wayne County	\$	15,000	\$	14,971	\$	29
Asheville District Office Building		22,409		22,409		-0-
Tower Residence—Pender County		14,761	_	13,926	_	835
Total Forestry	\$	52,170	\$	51,306	\$	864
Projects—State Parks						
Duke Power State Park	\$	241,000	\$	48,762	\$	192,238
Spillway Gate—Lake Waccamaw		12,000		622		11,378
Boat Facilities—Pettigrew Interpretation Center—		15,000		15,000		-0-
Weymouth Woods		153,938		21,740		132,198
Commercial Power—Hammocks Beach		40,000		45		39,955
Topographic Mapping		10,000		10,000		-0-
Transfer to Code 66765		72,000	_	_0_		72,000
Total State Parks	\$	543,938	\$	96,169	\$	447,769
TOTALS	\$	1,058,858	\$	609,508	\$	449,350

# CAPITAL IMPROVEMENT FUND OF 1967

# Statement of Receipts and Disbursements

Revenue		
Appropriation—Public Laws of 1967		\$1,188,500
Transferred from Capital Improvement Fund of 1965	\$ 72,000	
Transferred from Capital Improvement Fund of 1959	7,290	
N. C. State Highway Commission	40,000	
Department of Community Colleges	35,000	
Land and Water Conservation Funds	1,040,890	1,195,180
Total Receipts		\$2,383,680
Less: Disbursements		1,451,406
Unexpended		\$ 932,274

# Projects—Division of Travel and Promotion

and romotion						
Two Tourist Welcome Centers	Ar \$	167,500	\$ 	98,036	\$	nexpended 69,464
Total Division of Travel and Promotion	\$	167,500	\$	98,036	\$	69,464
Projects—Division of Commercial and Sports Fisheries						
Prestressed Concrete Dock	\$	130,500 7,50 <b>0</b>	\$	103,539 7,41 <b>1</b>	\$	26,961 89
Total Division of Commercial & Sports Fish.	\$	138,000	\$	110,950	\$	27,050
Projects—Division of Forestry						
Fairfield District Headquarters	æ	43,000	\$	3,672	\$	39,328
Sylva Headquarters Unit	Ψ	42,000	Ψ	1,404	Ψ	40,596
Addition to Building—Whiteville		75,000		3,251		71,749
Addition to Building—		15,000		0,201		11,110
Elizabeth City		48,000		5,730		42,270
Move Tower—Plymouth to Troy		7,500		6,094		1,406
120' Tower—Hoke County		19,000		14,746		4,254
Pender County Tower		19,500		15,776		3,724
72' Tower—Rutherfordton—		10,000		10,		0,
Polk County		15,000		5,087		9,913
100' Tower—Granville County		16,000		998		15,002
Move Tower-Rosemead to Edenton .		12,000		10,986		1,014
120' Tower-Camden County		19,000		15,949		3,051
Tower Residence-Haywood County		11,000		207		10,793
Tower Residence—Buncombe—						,
Henderson County  Renovate Shipping Building—		17,000		1,		16,999
Clayton Nursery		12,000		153		11,847
Radio Shop-Buncombe County		16,000		353		15,647
Office Building-Elizabeth City		24,000		—0—		24,000
Headquarters Unit—Hertford						
County		14,500		1,091		13,409
Total Division of Forestry	\$	410,500	\$	85,498	\$	325,002
Projects—Division of State Parks						
Maintenance & Service Area—						
Hammocks Beach	\$	42,300	\$	521	\$	41,779
Reception Area—Hammocks Beach		10,000		108		9,892
Replace Water System—						
Mt. Mitchell		7,500		—0—		7,500
Refreshment Stand—Jones Lake		17,200		1		17,199
Garbage Disposal—Mt. Mitchell		12,000		-0-		12,000
Service Road—Mt. Mitchell		75,000		2,543		$72,\!457$

Restoration of Fort and Addition to			
Picnic Area—Ft. Macon	50,000	1,997	48,003
Pave Roads & Parking Area-			
Reedy Creek	21,000	21,000	-0-
Pave Roads & Parking Area—			
Mr. Jefferson	60,000	60,000	-0-
Completion of Overlook—Cliffs of			
Neuse	10,000	513	9,487
Addition to Camping Area—			
Morrow Mountain	111,500	4,866	106,634
Family Camping Area—	a= aaa	0.070	24 222
Cliffs of Neuse	65,000	3,678	61,322
Kron Homesite Fencing—	0.000	0.014	000
Morrow Mountain	9,000	8,614	386
Pave Camping Roads—	11 000	11 005	CF
William B. Umstead	11,290	11,225	65
Replace Bathhouse—Ft. Macon	85,000	2,075	82,925
Family Camping Area—Pettigrew	40,000	3	39,997
Land Acquisition—Pilot Mountain	1,040,890	1,039,778	1,112
		165	
	<b>\$1,</b> 667,680	\$1,156,922	\$ 510,758
TOTALS	\$2,383,680	\$1,451,406	\$ 932,274

## KERR RESERVOIR DEVELOPMENT COMMISSION CAPITAL IMPROVEMENT FUND OF 1959

## Statement of Receipts and Disbursements

Revenue						To Date
Appropriation—Public Laws of 1959 Less: Disbursements					\$	40,000 39,938
Unexpended					\$	62
Projects				-		5
	App	ropriation	Exp	enditures	ı	nexpended
Bullocksville Park	. \$	6,950	\$	6,944	\$	3
Satterwhite Point		21,087		21,082		5
Warren County Area		6,384		6,340		44
Nutbush Bridge Area		1,779		1,775		4
General Area		3,800	_	3,797		3
Totals	. \$	40,000	\$	39,938	\$	62

#### KERR RESERVOIR DEVELOPMENT COMMISSION CAPITAL IMPROVEMENT FUND OF 1961

Statement of Receipts and Disbursements

Revenue						To Date
Appropriation—Public Laws of 1961 Less: Disbursements					\$	91,700 91,278
Unexpended					\$	422
Projects	Ap	propriation	E	rpenditures	τ	Jnexpended
Community Building	\$	27,000	\$	26,992	\$	8
Central Washhouse—Nutbush Bridge		11,000		10,807		193
Tent Camp Area—Satterwhite Point		19,100		18,997		103
Maintenance Shop—Satterwhite Point		10,400		10,344		56
Ranger Residence—Satterwhite Point		6,500		6,497		3
Grounds Improvements		3,022		3,022		0-
Picnic Shelter-Warren County		4,678		4,677		1
Sales Building—Flemington Road Marina		10,000		9,942		58
Totals	\$	91,700	\$	91,278	\$	422

# KERR RESERVOIR DEVELOPMENT COMMISSION CAPITAL IMPROVEMENT FUND 0F 1963

Statement of Receipts and Disbursements

Revenue						To Date
Appropriation—Public Laws of 1963 Less: Disbursements					\$	157,067 148,131
Unexpended Balance					\$	8,936
Projects						
	Ap	propriation	E	xpenditures	τ	Jnexpended
Kimball Point	\$	37,500	\$	36,667	\$	833
County Line Point		27,267	•	27,256		11
Bullocksville Park		16,200		14,639		1,561
Satterwhite Point		53,600		47,224		6,376
Flemington Road Marina		9,500		9,495		5
Williamsboro Wayside		4,000		3,999		1
Park Improvements		8,000		7,949		51
Nutbush Bridge Area		1,000		901		99
Totals	\$	157,067	\$	148,130	\$	8,937

#### KERR RESERVOIR DEVELOPMENT COMMISSION CAPITAL IMPROVEMENT FUND OF 1965

## Statement of Receipts and Disbursements

Revenue	To Date
Appropriation—Public Laws of 1965  Less: Disbursements	\$ 5,000 4,989
Unexpended Balance	\$ 11
Kimball Point Water Storage Tank \$ 5,000 \$ 4,989	\$ 11
Total \$ 5,000 \$ 4,989	\$ 11

## KERR RESERVOIR DEVELOPMENT COMMISSION CAPITAL IMPROVEMENT FUND OF 1967

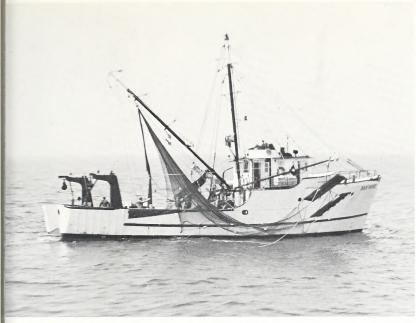
### Statement of Receipts and Disbursements

Revenue	To Date
Appropriation—Public Laws of 1967  Less: Disbursements	\$ 143,500 —0—
Unexpended Balance	\$ 143,500

#### RESTORATION OF TRYON PALACE CAPITAL IMPROVEMENT FUND OF 1963

## Statement of Receipts and Disbursements

Revenue		To Date
Proceeds from Maude Latham Estate  Less: Disbursements	\$	641,751
Furnishings \$ 16,705		
Construction		
Restoration		
Gardens		
Land Acquisition 5,281	_	640,232
Unexpended Balance	\$	1,519

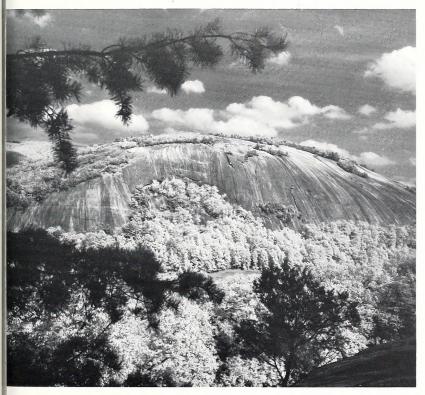


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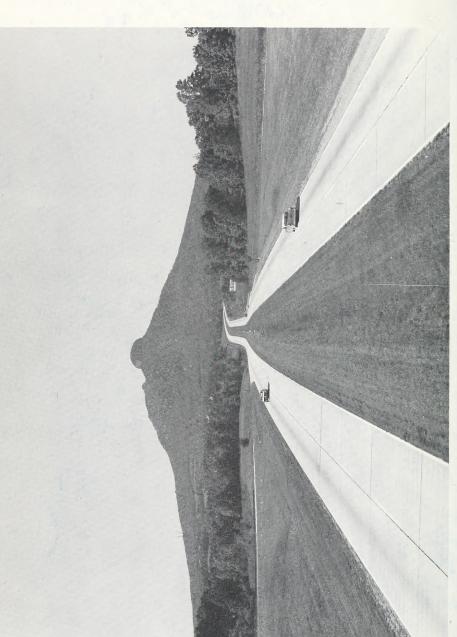
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Commercial and Sports Fisheries Research Vessel "Dan Moore" en route to exploratory fishing off the coast of North Carolina



View of Stone Mountain State Park in Wilkes County



View of Pilot Mountain State Park in Surry County.



